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ABSTRACT

Research and theoretical literature about adult development and adult learning are synthesized within a conceptual framework that has three basic domains: life phase, developmental stage, and learning style. The life phase includes theories that identify age-linked periods of stability and transition throughout adulthood. The development stage refers to structural dimensions of intellect, character, and personality organization. Learning style includes research on individuals' characteristic predilections and preferences for certain functional modes of learning over others, both cognitively and behaviorally. For each area, the parameters of the construct are defined, key concepts are identified, major representative theories are reviewed, and the implications of the viewpoint for adult education are discussed. A large proportion of the text deals with the domain of the developmental stage. Implications for educational practice are analyzed on three levels: individual uses, institutional uses, and societal uses. A major premise of the paper is the idea that adults develop, and that educational programs and opportunities, and some of the resources of society, ought to be organized in ways that are responsive to adults' developmental needs. (SW)

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A SYSTHESIS OF RESEARCH AND THEORY ON ADULT DEVELOPMENT: ITS IMPLICATIONS FOR ADULT LEARNING AND POSTSECONDARY EDUCATION

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HE 010 970

Rita Weathersby
Special Qualifying Paper
Harvard University
Graduate School of Education
March 1976

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There are several people to whom I owe intellectual and emotional debts in conjunction with this paper. First among them is Harry Lasker, whose course in adult development introduced me to most of this literature and to the excitement of a teaching process built around adults' experiences. The organization of theories into the broad rubrics of stage and phase is his. I have elaborated his basic framework, exploring my own questions about its meaning and potential usefulness. I also owe significant debts of conceptual perspectives, encouragement, and the facilitation of my own learning to Bill Torbert, Chris Argyris and Paul Ylvisaker, at the Harvard Graduate School of Education, and to Arthur Chickering at Empire State College.

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CHAPTER I

INTRODUCTION

The purpose of this paper is to synthesize research and theory about adult development in such a form that it is useful for practitioners of adult education. A major premise of this paper is the idea that adults develop, and that educational programs and opportunities, and some of the resources of society, ought to be organized in ways that are responsive to adult's developmental needs. These ideas in themselves are powerful and timely notions. They call attention to the inner experiences of adults as they learn from work and other life experiences, and as they cope with and use institutional settings and programs designed for their educational benefit. They highlight the personal meanings that education assumes in people's lives. This touches us where we live as adults, where personal meanings and motivations guide our daily actions. A developmental perspective also places individual development in the wider context of needed, and perhaps developmental, changes in educational institutions and in society. This is an admittedly idealistic vantage-point from which to look at the policy and practice of education for adults.

However, such a look is timely for educational prac-

titioners and for those who are in positions to make policy decisions that affect educational opportunities for adults because (1) there is beginning to be a body of research and theory concerning adult development, although much of it is scattered and fugitive (a great deal of this literature is synthesized in this paper); (2) the adult segment of our population is growing proportionate to a decrease in numbers and relative size of the youth cohort; and (3) there is evidence that adults are increasingly demanding and participating in a wide variety of educational opportunities, in academic, professional, vocational and avocational realms of learning; and (4) with declining enrollments of traditional college-going youth, it is a matter of enlightened self-interest for colleges and universities in difficult financial straits to establish continuing education and external degree programs and to otherwise serve an adult population of "new learners." Additionally, for reasons related both to economics and quality of life, there is talk among national policy makers of ways to break the lockstep of one-chance matriculation from high school directly to college, and of ways to create flexible second changes for learning of all kinds -- basic literacy, vocational and professional training and retraining, mid-career shifts and new career development, avocational learning and personal development. Hopefully these concerns will result in a nationwide commit-

ment to "recurrent education" and "lifelong learning."

I enclose these words in quotation marks because although they appear frequently in publications of the American Association for Higher Education and of the Adult Education Association of America, and are recurrent themes at national meetings and in discussions of national educational policy, there is little scholarly work relating the advocacy of lifelong learning and the creation of a rich and diverse system of postsecondary education to concepts of adult development and institutional change. As policy makers and educators, we do not have a sufficiently differentiated view of the salient characteristics of adults as learners, or of the ways in which adults' positions in various developmental sequences influences their purposes for entering educational programs, and the kind and quality of learning they engage in once they do enter. Neither do we have a comprehensive view of the nature and magnitude of institutional and social change that is necessary if educational programs are to do the sorts of diagnosis, design, and evaluation suggested by a developmental or even individually responsive perspective on adult education. My concern in this paper is to lay a conceptual foundation so that the ideals of recurrent education and life-long learning will not become hollow slogans.

OVERVIEW OF THIS CONCEPTUAL FRAMEWORK

Until recently, most social science researchers and most educators have, for lack of available and systematic evidence to the contrary, assumed that development stops at age 16 or 18, with the end of adolescence, and that adulthood is a fairly stable human state ranging from one's early twenties until 65 or so, when "aging" sets in. However, this view is beginning to be challenged by an emerging body of research on developmental changes that take place during adulthood, and by some researchers and theorists who relate psychological understandings of the processes of growth and change in adulthood to the ways that adults learn in a variety of situations.

I have synthesized much of this literature on adult development within a conceptual framework that has three basic domains -- life phase, developmental stage, and learning style. This classification of developmental theories into the broad rubrics of phase and stage comes from Harry Lasker, whose course at Harvard on adult development follows this basic outline. I have added learning style as a third domain of analysis. Figure 1, following, summarizes the major aspects of this framework.

The domain of <u>life phase</u> includes theories which identify age-linked periods of stability and transition

FIGURE 1

Overview of the Conceptual Framework

Domain	Key Concepts	Conditions for Change or Development	Educational Implications
LIFE PHASES: periods when certain life issues or adaptive tasks are paramount; life phases follow in succession creating age-linked periods of transition and stability throughout adulthood.	Developmental tasks are embedded in the life cycle. People change their Life Structure (an individual's external life situation and its internal meanings) repeatedly over time. Life phases include: Marker Events (events associated with the tasks of a phase); The Dream (vision of one's personal future); a Mentor (an older person who is adviser, teacher and protector) is important.	All stabilizations are temporary lasting 8-10 years. Passing of time creates pressure on one's life structure; forces causing change are biological (increasing age of self and others), cultural (social expectations) and individual (one's conception of adult reality). Changes are made to reduce dissatisfactions with the limits of a particular life structure.	Diagnosis of larger life issues underlying participation in education; identification and support of groups and individuals "at risk" in transitional periods.
DEVELOPMENTAL STAGES: a sequence of personality organizations, or mental structures, each providing a qualitatively different frame of reference for experience; a characterology involving patterns of perception, thought, emotion.	Social reality is subjective and patterned in stage-related ways. Strands of development are interrelated (e.g. moral reasoning, epistemology, motivation, interpersonal behavior, cognitive style). Stages represent holistic and hierarchical integrations; people go through stages in order; people at lower stages cannot understand the reasoning or personality dynamics of those at higher stages.	Stage change occurs through reconciling discrepancies between expectations and perceived events, through role taking opportunities, exposure to reasoning and behavior of the next stage; a series of small changes create a new character structure. Development can stop at any level; few adults reach the higher stages in any developmental sequence.	"A way in" and a map for growth; approaches to education are stage related (e.g. motivation, cognitive style, conceptions of knowledge, teaching & learning, locus of responsibility, situational coping patterns). Stage is also a frame of reference for educators' assumptions, goals, interpersonal behavior, and methodologies.
LEARNING STYLES: characteristic preferences for certain functional modes of learning over others; defined cognitively or behaviorally.	Styles represent predilections and basic learning modes which do not change greatly over time. They are value neutral; each mode has strengths and limits; all modes are valuable in problem solving. Task groups, academic disciplines and occupational specializations have learning style biases.	One first "specializes" in a preferred mode or stength; then broadens and deepens one's style to include other styles, particularly those with opposite strengths; usually thought of as a dialectical process.	Counseling and instructional design; identifying individual strengths and limits, and also learning modes required by various occupations and disciplines; matching or mismatching to enable success, or develop more effective learning styles; self-diagnosis can be helpful.

throughout adulthood. A life phase is a period when certain issues or adaptive tasks are presumed to be paramount, either because of developmental tasks embedded in the human life cycle or generated by one's social milieu. An understanding of adult life phases allows us to identify the larger meanings underlying adult participation in various forms of education and highlights the function of education in supporting or facilitating individuals' progress through transitional periods.

The domain of <u>developmental stage</u> refers to structural dimensions of intellect, character, and personality organization, each of which constitutes a qualitatively different frame of reference for responding to and learning from one's daily experiences. Stage theories offer detailed maps of cognitive, emotional, interpersonal and character development; as such, they provide differentiated views of "where an adult is at," psychologically speaking, and how he or she might best be taught. Stage theories also shed light on the psychological dynamics and personal meanings behind conflicting philosophies and methodologies of education.

The domain of <u>learning style</u> includes research on individuals' characteristic predilections and preferences for certain functional modes of learning over others, both cognitively and behaviorally. Knowledge of learning styles can be useful in counseling and in designing modes of instruc-

tion that match the student's abilities and the learning style demands of various occupations or disciplines.

These three domains represent intersecting and overlapping dimensions of adult development. Each constitutes a lens or perspective from which to conceptualize individual differences and commonalities among adults as learners. "Learning" has a different meaning within each domain, and current research and theory, as Figure 1 illustrates, posit that different conditions are needed for development. Thus, the educational implications of theories in each domain also tend to be different.

OUTLINE OF THIS PAPER: DEFINITIONS, CAVEATS AND PERSPECTIVES

This paper consists of three major sections, one for each analytical domain. In each section, I define the parameters of the construct, identify key concepts, review the work of several major or representative theorists, and then discuss the salient implications of viewing adult education from this perspective. Where educational applications are connected with the work of a single researcher, I discuss them in conjunction with his or her work. A large proportion of the text deals with the domain of developmental stage. This is so because this area has been the most solidly researched, and its implications for education are the most

powerful and provocative. Because the paper's scope necessarily omits much of the substance of each theorist's work, I have made extensive use of charts and figures to refresh memories and aid understanding. In the last chapter, I recapitulate the most salient implications for educational practice on three levels: individual uses, as we chart our own growth and understand that of others; institutional uses, as we attempt to design institutions and instruction that fosters development; and as a society, as we seek to realize ideals and direct our own evolution.

The reader should know beforehand that the research and theory reviewed here does not fit neatly into the three domains. These perspectives play off against each other; synthesis and comparison invite contradiction and unanswered questions. There are vast differences among theorists in scholarly traditions and underlying assumptions (for example, psychiatry, social psychology, education science, psychometrics, cognitive developmental psychology) ; in amount of research (several years to twenty years of building on an established tradition); in research methodology (longitudinal and cross-sectional case studies, life history, projective testing, clinical observation, self-report scales, questionnaires). There are also differences in age, size, and social class of sample populations, and in measurement (the assumptions and procedures behind scoring systems, their degree of com-

plexity and sophistication). These differences in themselves raise the issue of how a practitioner uses theory and research, which usually conflicts when one deals with little understood human phenomena such as development or learning.

Some theorists are strange bedfellows. For example, Jung's psychoanalytic formulation of personality types is very different from Hill's computerized system of cognitive style mapping, yet I have included both in the domain of learning style. Erikson's theory of the stages of identity development is, strictly speaking, neither a stage or a phase theory, although I can justify its placement in the domain of life phase. Loevinger's work on ego development is rightly classified with developmental stage, but her stage constructions include psychoanalytic and affective processes which differ from those of Kohlberg and other structural developmental theorists.

Grouping theorists together highlights similarities and differences both within and across analytical domains. My assumption is that multiple and conflicting perspectives on human experience can be simultaneously true. To be educationally useful one theory need not be proved right and another wrong, particularly when the theories describe human growth and development, motivation and learning, and their interrelationships with the social and cultural milieu in which we live out out lives as human beings. Thus the domains

of this conceptual framework exist in continuing tension with each other, and there is much diversity within domains. The metaphor of the lens is an important one: a theatrical spotlight, for example, highlights only certain parts of the setting and action; using different angles of dispersion and various color overlays can create very different impressions. The same is true of the theories within and across this conceptual framework.

A PRACTITIONER'S PERSPECTIVE

There are at least two perspectives for constructing a conceptual framework of this kind: that of a researcher and that of a practitioner. From the researcher's perspective, one looks for logical contradictions, limits to validity, differences in assumptions and research methodology, and unresolved issues and questions. This approach leads to conclusions about fruitful areas and methods for further research. Keeping this in context, my stance here is that of a practitioner attempting to synthesize broad outlines of theory and to explore its implications in order to reconceptualize practice. Although a practitioner needs to be aware of the extent and limitations of the researcher's knowledge, he or she can carry unresolved questions into the interactive processes of teaching, instructional design, counseling and policy making. The practitioner can be less

critical than the researcher of the limits of knowledge -- must be, in fact, to continue acting in the midst of uncertainty. However, in my view, a practitioner must be more critical of the ways in which knowledge, concepts and values are used to inform action.

My hope in elaborating this conceptual framework is that it will provide a cognitive map of the territory of adult development, a perspective which I believe adds substance and new meanings to the powerful ideals of lifelong learning and recurrent education. The value of a theory, conceptual framework, or analytic domain is that it focuses attention. Directing attention to adult development can counteract personal and institutional tendencies to suit oneself or choose blindly in matters of educational policy and pedagogy, and can lead to educational practices that enhance the quality of life for adults.

CHAPTER II

THE DOMAIN OF LIFE PHASE

The work of Erik Erickson, Daniel Levinson and Roger Gould provides the conceptual underpinnings for the domain of life phase, as I present it here. I will review their work in turn. My overall construction of a practitioner's view of life phase is a synthesis of their ideas and approach and also includes the work of other researchers whose work I understand as fitting into this broad domain. Bernice Neugarten, for example (1963, 1969), has built on Erikson's formulations concerning the life cycle, elaborating the role of age and of time perspectives in adult's views of their lives (see Figure 3). Marjorie Fiske Lowenthal and her associates (1975) have studied the adaptive stance of adults just prior to four life transitions, identifying distinctive styles of coping which are dramatically different for men and women within each period. Henry Maas and Joseph Kuypers (1974) have compared men and women's life styles and personalities across a forty-year period, seeking to relate earlier and later phases of the adult life course, and to understand how the contexts of early adulthood and old age influence the ways people live and the persons they become. Gail Sheehy (1974) has synthesized Levinson and Gould's findings and added some original observations con-

cerning differences in the timing of men's and women's life phases. The work of these researchers illuminates different aspects of adult's life phases, unfortunately without a common vocabulary to aid synthesis and application.

Of the three constructs in this framework, the research on life phase is the most exploratory. Statements about life phases, unless supported by evidence, should be understood as postulates or propositions. This raises the question of how wise it is for educators to draw implications for practice on the basis of what is certainly considered by researchers to be fragmentary evidence. Yet this tension is not new. A practitioner -- anyone who acts and makes decisions -- never has complete information. First-order questions are "When do we know enough to act?," "On what basis do we justify our actions?," and "How can we test the continuing validity of our actions and assumptions?" These questions arise poignantly with every consientious (perhaps conscious) application of social science to education. In my opinion these are unresolvable questions in the abstract; they are essential on a day-to-day basis to adult education that promotes personal development.

To redefine the parameters of the construct, the domain of life phase includes ideas about age-linked periods of stability and transition throughout adulthood. A life phase is a period when certain issues or adaptive tasks are presumed to be paramount, either because a "developmental

task" is embedded in the human life cycle, or because society's role expectations and processes of socialization make such changes natural or desirable. Critical life tasks are presumed to change with life phase; they are worked out internally (psychodynamically) and externally by one's daily actions and decisions in living. Although life phases are age-linked, they are probably not universal. Idiosyncracies of personality, life style and subculture appear to affect the timing of life phases. These idiosyncracies mean that to determine a person's life phase it is best to compare that person with himself or herself at a former time; nevertheless, there appear to be, on the average, some striking and predictable patterns of change and transition.

One important contribution of life phase theories to an analytic perspective on adult learning is that they dispel the notion that adulthood is a stable state in which disequilibrium and distress are always individual matters, unrelated to natural or predictable life transitions. To the extent that adults use education as a support in life transitions or use education differently depending upon their phase of life, the substance of the transitions and the anxiety that accompanies them is integrally related to adult education.

Figures 2 and 3, following, present the major outlines of the conceptualizations of Erikson, Neugarten, Levinson,

Gould and Sheehy concerning adult life periods. Later figures (Figures 4, 5 and 6) present more of the substance of these conceptualizations. These charts reveal a startling similarity in broad and complementary themes of adapting to life. It is important to note, though, when looking at these formulations of specific periods in adulthood that many of the changes described by these theorists are internal and continuous. To use Sheehy's words,

> Development takes place on a <u>daily</u> basis. A series of microscopic experiences require us to remodel ourselves continually, in search of a better fit between the inner imperatives which drive us -- love, sex, safety, autonomy, accomplishment, integrity, etc. -- and the outer structures which enclose us -- marriage, occupation, and membership in society....It is most useful, then, to think of all persons as constantly refining their own view of the world and their sense of self within that world.
>
> (Sheehy, 1974, p. 25)

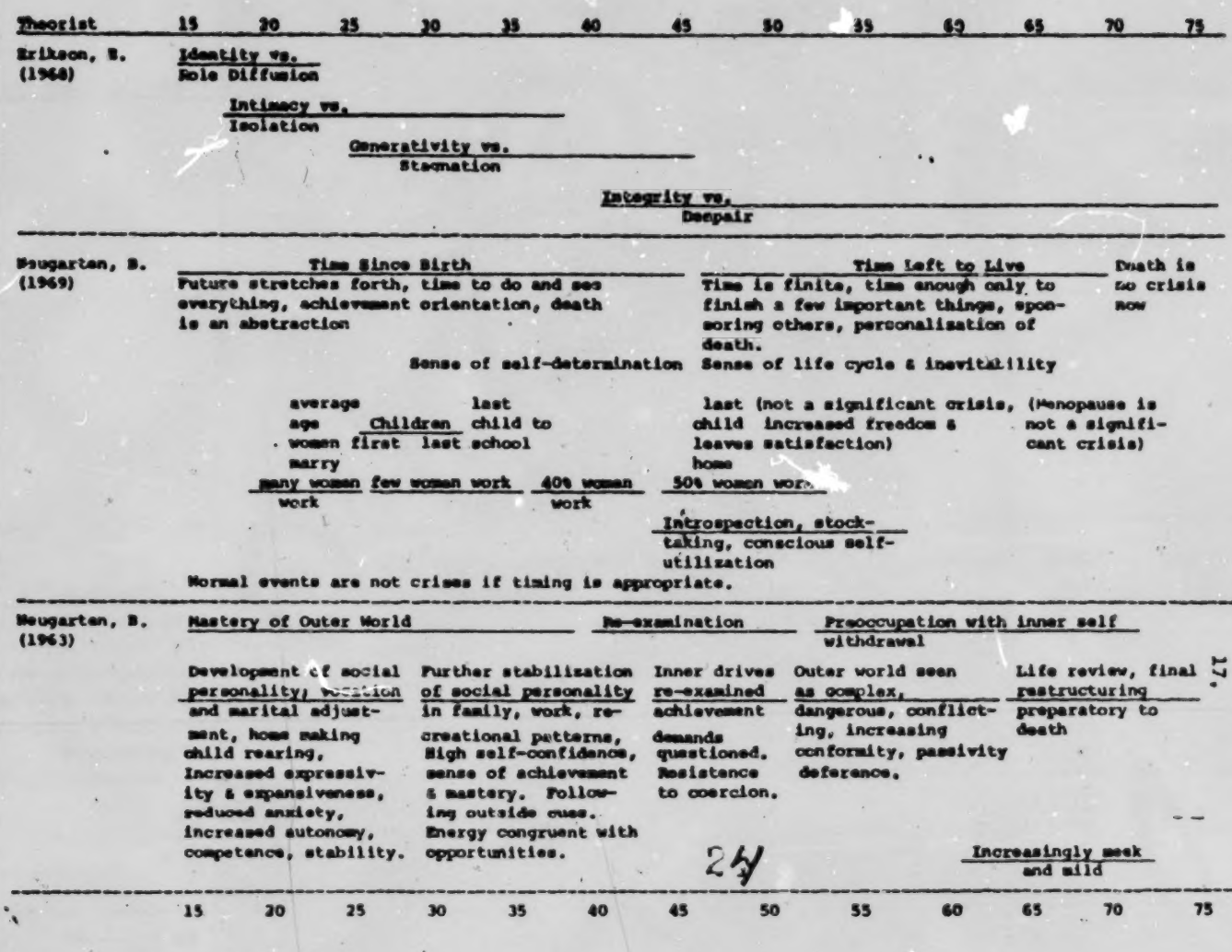
Figure 2

Three Conceptions of Life Phases in Adulthood

Theorist	15	20	25	30	35	40	45	50	55	60	65	70	75
Levinson, D.	Leaving the Family			Settling Down			Restabilization						
	Getting into the Adult World			BOOM (Becoming One's Own Man)									
	Forming and revising the Dream												
	Transitional period												
	Mentor plays significant role												
						Mid-life Transition							
Gould, R.L. (1972)	leaving parents breaking out	leaving parents staying out	becoming adult marriage work	question choices	continued questioning		occupational die is cast	mellowing of feelings & relationships, spouse increasingly important. review of accomplishments, eagerness to share everyday "human" joys and sorrows; death a new presence.					
Sheehy, G. (1974)	pulling up roots	provisional adulthood	age 30 transition	rooting	mid-life transition		restabilization transition & flowering						
	15	20	25	30	35	40	45	50	55	60	65	70	75

Source: Chickering, 1975.

Figure 3
Erikson's and Neugarten's Perspectives on the Life Cycle


Theorist
15 20 25 30 35 40 45 50 55 60 65 70 75
Erikson, E. (1968)
Identity vs. Role Diffusion
Intimacy vs. Isolation
Generativity vs. Stagnation
Integrity vs. Despair
Neugarten, B. (1969)
Time Since Birth
Future stretches forth, time to do and see everything, achievement orientation, death is an abstraction
Time Left to Live
Time is finite, time enough only to finish a few important things, sponsoring others, personalization of death.
Death is no crisis now
Sense of self-determination
Sense of life cycle & inevitability
average age women marry
Children first last
last child to school
last child leaves home
(not a significant crisis, increased freedom & satisfaction)
(Menopause is not a significant crisis)
many women work
few women work
40% women work
50% women work
Introspection, stock-taking, conscious self-utilization
Normal events are not crises if timing is appropriate.
Neugarten, B. (1963)
Mastery of Outer World
Re-examination
Preoccupation with inner self
withdrawal
Development of social personality; vocation and marital adjustment, home making child rearing, increased expressivity & expansiveness, reduced anxiety, increased autonomy, competence, stability.
Further stabilization of social personality in family, work, recreational patterns, High self-confidence, sense of achievement & mastery. Following outside cues. Energy congruent with opportunities.
Inner drives re-examined
achievement demands questioned. Resistance to coercion.
Outer world seen as complex, dangerous, conflicting, increasing conformity, passivity deference.
Life review, final restructuring
preparatory to death
Increasingly meek and mild
15 20 25 30 35 40 45 50 55 60 65 70 75

Source: Chickering, 1975.

ERIKSON'S VIEW OF ADULT LIFE TASKS

Erik Erikson's work focuses attention on the importance of each major life period in creating a "vital personality," or wholly functioning person. Erikson's conceptualization is based on his psychoanalytic practice, anthropological studies within a Freudian perspective, and research with normal children. Starting with infancy, he conceives of "psychosexual" development as proceeding through a series of crises, each involving critical tasks which are embedded in the human life cycle. Each crisis is centered around a critical issue which contains a virtue to be mastered and an antithesis to be avoided if a healthy personality is to emerge. Figure 4 outlines these critical issues; Erikson assigns to adulthood the issues of intimacy, generativity and integrity.

FIGURE 4

Erikson's Stages of Identity Development

Life Period		Critical Issue (Virtue versus its Antithesis)
I.	Infancy	Trust versus Mistrust
II.	Early Childhood	Autonomy versus Shame and Doubt
III.	Later Childhood	Initiative versus Guilt
IV.	School Age	Industry versus Inferiority
V.	Adolescence	Identity vs. Identity Confusion (or Diffusion)
VI.	Adulthood (20's & 30's)	Intimacy versus Isolation
VII.	Adulthood (40's & 50's)	Generativity versus Stagnation
VIII.	Adulthood (60's & beyond)	Integrity vs. Despair or Disgust

In assigning the issues of intimacy and generativity to adults, Erikson quotes Freud's remark that a normal person should be able to do two things well: to love and to work, these being the major tasks of adulthood. In one's twenties the issue is intimacy; in one's forties and fifties, the concern is with generativity or creativity and productivity, a voluntary commitment to guide new generations and younger associates. Having children does not necessarily insure generativity. The final stage of ego integration, which begins around 60, is integrity: accepting what has transpired in one's "one and only life" as both valid and necessary.

In Erikson's thinking, a developmental crisis is not a catastrophe but a decisive turning point which simultaneously brings heightened potential for intrapersonal integration and increased vulnerability to personality disintegration. Most important, a developmental task is never mastered once and for all; rather, at the conclusion of each life period one works out a characteristic balance or ratio of positive resolution of an issue versus its negative opposite. This balance can be changed by later experiences; in new periods of transition one cycles back through earlier crises and re-affirms or renegotiates their resolution. This offers one insightful perspective on adult "identity crises." In periods of transition one's identity again becomes problematic, and adults are forced to reconsider and perhaps renegotiate previous resolutions of trust, autonomy, initiative, industry

and identity before proceeding to newer, more integrated and satisfactory versions of intimacy, generativity or integrity.

Erikson might be called the father of life phase theorists except that he is in some sense a stage theorist as well. His stages of identity development parallel developmental sequences embedded in Loevinger's stages of ego development, and there is a loose correspondence between them and Kohlberg's stages of moral reasoning. However, insofar as Erikson's stages are temporal and functional rather than structural, he belongs with the phase theorists.

Erikson's central contribution to the domain of life phase is the notion that the life cycle itself contains tasks of functional importance to personality development. He has not done much research or writing about adults, so that his idea that there are developmental tasks is more useful than the specific information he can give us concerning the three issues he identifies for adulthood. One important and unresolved question is just where these developmental tasks come from. Erikson sees these tasks emerging according to an epigenetic principle, the notion that

> ....anything that grows has a ground plan, and that out of this ground plan the parts arise, each having its time of special ascendency, until all the parts have arisen to form a functioning whole.
>
> (Erikson, 1968, p. 92)

This idea of internal unfolding is questioned by Levinson,

who has invested more energy in observing and formulating the components of the evolving ground plan, a task Erikson admits he does not know how to do. The question of the origin of life periods is not trivial from a practitioner's standpoint; if personality development is only a matter of internal resolutions triggered enigmatically by the passage of time, one's stance as a helper consists mainly of waiting for the crisis to arrive.

As Loevinger points out in a newly-published book (1976), Erikson's stages seem simultaneously based on several different models or kinds of development. Since he himself does not clear up the ambiguities, his theory is difficult to reconcile with others' conceptual frameworks. She sees his conceptualization as important in that it differentiates developmental progressions from at least one aspect of adjustment; that is, the crises Erikson identifies as characteristic of successive life periods are separated, theoretically, from the ratio of the favorable to the unfavorable alternative in each issue's resolution.

LEVINSON'S VIEW OF LIFE STRUCTURE

Like Erikson, Daniel Levinson and his associates at Yale have identified critical issues and periods in adulthood.

Levinson's concern is with generating hypotheses concerning relatively universal, genotypic, age-linked developmental periods in the adult life cycle. He and his associates conceive of the origins of these periods in both the nature of man as a "bio-psycho-social organism," and in the nature of society as an enduring form of collective life involving several generations. Levinson's approach is a broad one, that of looking for developmental tasks, structures, and processes that include biological, psychodynamic, cultural and social-structural factors, interacting as he sees it now in only partial synchronization. His view of the origin of life periods differs from Erikson's:

> These periods do not represent simply an unfolding of maturational potentials from within; they are thus different from the Freudian or Piagetian stages of childhood development, which are seen largely as an internal unfolding. Nor do they simply represent stages in a career sequence as shaped by an occupational education, or familial system. In other words, the periods are not simply a function of adult socializing systems, although these systems play an important part in defining timetables and in shaping one's course through them.
>
> (Levinson, et al., 1974, p. 4)

Figure 5 illustrates the major life periods deduced so far from Levinson's and others case study research, and the life tasks, marker events (common events associated with the tasks of a phase), and characteristic concerns apparently associated with different life phases. Levinson identifies "developmental periods" and "transitional periods." A transi-

Figure 5
Developmental Tasks of Adult Life Phases[1]

Life Phase	Major Tasks	Marker Events	Characteristic Stance
Leaving the Family (16 or 18--20-24)	Separate self from family; reduce dependence on familial support and authority; develop new home base; regard self as an adult (*Identity vs. Role Diffusion*)	Leave home; new roles and more autonomous living arrangements; college, travel, army, job. Initial decisions about what to study, career, love affairs.	A balance between "being in" and "moving out" of the family.
Getting Into the Adult World (Early 20's; 27 to 29)	Explore available possibilities of adult world to arrive at initial vision of oneself as an adult. Fashion an initial life structure; develop the capacity for intimacy, create a Dream; find a mentor. (*Intimacy vs. Aloneness*)	Provisional commitment to occupation and first stages of a career; being hired; first job; adjusting to work world; quitting, being fired; unemployment; moving; marriage; decision to have a child; child goes to school; purchase of a home; community activities; organizational roles.	"Doing what one should." Living and building for the future; transiency is an alternative track.
Age 30 Transition (late 20's; early 30's)	Reexamine life structure and present commitments; make desired changes, particularly to incorporate deeper strivings put aside in the 20's.	Change occupation or directions within an occupation; go back to school; love affair; separation; divorce, first marriage; remarriage.	"What is life all about now that I'm doing what I should? What do I want out of life?

Life Phase	Major Tasks	Common Marker Events	Characteristic Stance
Settling Down (early 30's)	Make deeper commitments; invest more of self in work, family and valued interests; become a junior member of one's occupational tribe; set a timetable for shaping one's life vision into concrete long-term goals.	Death of parents; pursue work, family activities, and interests.	Concern to establish order and stability in life, and with "making it", with setting long range goals and meeting them.
Becoming One's Own Man, BOOM (35-39; 39-42)	Become serious member of occupational group; prune dependent ties to boss, critics, colleagues, spouse, mentor. Seek independence & affirmation by society in most valued role.	Crucial promotion, recognition; break with mentor.	Suspended animation; waiting for the confirmatory event; time becomes finite and worrisome.
Mid-Life Transition (early 40's)	Create a better fit between life structure and self; resolve experience of disparity between inner sense of the benefits of living within a particular structure and what else one wants in life.	Change in activities from realization that life ambitions might not develop; change of career; remarriage; empty nest; loss of fertility; death of friend, sibling or child.	Awareness of bodily decline, aging, own mortality; emergence of feminine aspects of self for men, masculine aspects for women.
Restabilization (a three-year period around 45)	(*Generativity vs. Stagnation*) (*Integrity vs. Despair*)	Become a mentor, develop new interests or hobbies, retirement; death of spouse; grand children.	A mellowing of feelings and relationships.

[1] Sources for this chart are Levinson (1974), Gould (1972), Sheehy (1974), Erikson (1968), and Lasker (1975). Erikson's stages appear in parenthesis. The life phase titles and time designations are Levinson's. This chart ends prematurely at mid-life. Neugarten's work (1963, 1969) expands the characterization of later life periods.

tional period is defined as a "turning point or boundary between two periods of greater stability." A transition may go relatively smoothly, or may involve considerable inner turmoil.

In order to counteract prevailing assumptions that in adulthood very little is age-linked, Levinson is trying to be specific about ages associated with the life periods. He is also challenging a prevalent individualistic bias that says we're all unique individuals with different timetables and few commonalities. The research so far seems to support considerable age specificity, even though he gives overlapping age spans for each period.

To explain what happens in transitions, Levinson has created the concept of <u>life structure</u>:

> In its external aspects it refers to an individual's overall pattern of roles, memberships, interests, condition and style of living, long-term goals and the like -- the particular ways in which he is plugged into society. In its internal aspects, life structure includes the personal meanings these have for the individual, as well as the inner identities, core values, fantasies, psychodynamic qualities that shape and infuse one's engagement in the world and are to some degree fulfilled and changed by it.
>
> (Levinson, et al., 1974, pp.7-8)

As a concept, the idea of life structure focuses on the boundary between the individual and society, inviting a fuller examination of the social world and the inner dynamics of personality.

What leads to phase changes? Putting Levinson and Gould together, one speculates that the passing of time sets

in motion a series of interacting processes that combine to create pressure on one's existing life structure. There are changes in biological functioning brought about by increasing age, changes in the ages of one's parents and children, changes in cultural expectations about what a person of one's age and stature should be doing, and, finally, progressive substitutions of one's ideas about adult "realities" for the idealized view of adulthood formed in childhood.

One of the things that seems to happen throughout adulthood is a person's attempt to maintain an equilibrium or "goodness of fit" between one's life structure and one's experience of self. Levinson believes that in creating an integrated life structure one can only use parts of one's self, which means that important parts are left out. Changes in life structure can be seen as attempts to resolve disparities between a person's inner sense of the experience of living within a particular life structure, and the aspects of self that were neglected or left out when one created that structure. As he explains it for men undergoing mid-life transition:

> The central issue is not whether he succeeds or fails in achieving his goals. The issue, rather, is what to do with the experience of disparity between what he has gained in an inner sense from living within a particular structure, and what he wants for himself. The sense of disparity between 'what I've gotten to this point' and 'what it is I really want' instigates a soul-searching for what it is I really want.
>
> To put it differently, it is not a matter of how many rewards one has obtained; it is a matter

> of the goodness of fit between the life structure and the self. A man may do extremely well in achieving his goals and yet find his success hollow and bittersweet. If, after failing in an important respect, he comes primarily to castigate himself for not being able to 'make it,' then he is having a rough time; but he is not having a mid-life crisis. He just regrets failure. He is having a crisis to the extent that he questions his life structure and feels the stirrings of powerful forces within himself that lead him to modify or drastically change the structure.
> (Levinson, et al., 1974, p. 13)

Two other concepts are important in Levinson's work; the Dream, a vision of one's personal future, usually articulated in a professional or occupational context, and the concept of a mentor, an older person who serves as adviser, teacher and protector, whose blessing is crucial, who becomes psychologically very important to a young man in his "getting into the world" (twenties) or "settling down" (early thirties) periods. The importance of the Dream and the mentor change over time with the changing configurations of one's life structure.

Levinson's formulation of developmental periods is based on four years of intensive interviews with a sample of forty men, between ages 35-45, in four occupational groups: blue and white collar workers in industry; business executives; academic biologists; and novelists. This sample obviously limits generalization. It is certainly an open question as to how universal are the tasks and marker events that have been identified for a particular life period. For example,

where are women in these formulations? Do they have Dreams and mentors? Additionally, although marker events are considered to be generally age-related, some can occur unpredictably at any time; for example, the death of a parent or spouse, or unforeseen technological unemployment. As life styles become increasingly diverse, the key events which trigger life phases may become even less related to chronological age. For example, most couples now choose to have children in their twenties, but others are waiting until their early and mid-thirties, and still others plan to adopt a child in their forties, making the age at which one decides to have a child and the age at which one's children leave home quite disparate across the total population. Sheehy's (1974) and Lowenthal's (1975) research shows a difference in timing of men's and women's life phases; there is probably also a difference between the life phases of women whose initial career choices are in the home as opposed to those whose major career is outside it. No one has yet explored the life periods of women using Levinson's constructs.

Additionally, the degree of change associated with life phase transitions probably varies a great deal by life style and by developmental stage, to mix two very different ways of classifying individual differences among adults. In a traditionally-oriented life style, or conventional person, where one lives one's life according to others' clear expectations, life phase transitions may be milder and more age-related. For example, they may center around major dis-

ruptions of a valued role; for women, the last child leaving home, and for men, retirement. With less tradition-bound life styles, where more options are considered and/or acted upon in both personal and professional realms (one's perspective is conscientious or autonomous in Loevinger's scheme of ego development), the stress of change may be greater, and the marker events less age-related and more idiosyncratic. This is pure hypothesis at the moment, but there is supporting evidence in Toffer's Future Shock. Certainly, research on adults' life periods is confounded by the probability that life structure changes may involve changes in developmental stage as well, and that different life choices set up different patterns of stability and transition.

In my opinion, proving the universality of particular formulations of life periods is not as important as acknowledging the validity of the idea that one's life structure, viewed internally, if not externally, changes configurations at regular intervals throughout one's life. What if someone ignores feelings of dissatisfaction and refuses to reformulate a life structure? Levinson's research seems to indicate that if a man does not reexamine his life at forty, then his identity crisis at fifty will be more profound. The most significant point is that any stabilization is temporary--no life structure lasts more than 8 to 10 years. One's sense of values and priorities changes, as do circumstances and

others' ages, until one recognizes goals and needs not satisfied by one's current life structure. Over time and in some predictable sequences, we change our life structure and our sense of identity.

GOULD'S PHASES OF ADULT LIFE

Roger Gould, a psychiatrist at the University of California at Los Angeles, has studied phases of adult life by examining age-related changes in the issues that people want to talk about in therapy groups, and documenting changes in their attitudes toward various aspects of their lives in relation to the passage of time: for example, relationships to parents, friends, children and spouses, and feelings about one's personality, job, time, and sexual behavior. Gould's work corroborates some of the transition points and developmental tasks formulated independently by Levinson, and highlights the changes in adults' inner experience in successive life phases.

> While children mark the passing years by their changing bodies, adults change their minds. Passing years and passing events slowly accumulate like a viscous wave, eventually releasing their energy and assuming new forms in altered relationships with both time and people.
> (Gould, 1975, p. 78)

Gould's studies (1972, 1975) have biases in that they use cross-sectional data to aid understanding of a continuous

process, and appear to have over-sampled middle-class and professional populations. This is typical of most research on adult development not based on deficiency or pathology, which raises interesting questions for practitioners. The important question here, however, is what insight Gould's studies bring to bear on the concept of life phase.

Where Levinson's contribution is the concept of changing configurations of life structure, Gould's interest lies in a changing sequence of inner states of consciousness, roughly coordinated with age, that define one's posturing to the inner and outer world. Although these states are time-dominated, they are not necessarily age-specific for any one individual. They depend upon a total context of personality, life style, and subculture in which each person's most relevant comparison is with himself or herself at a former time.

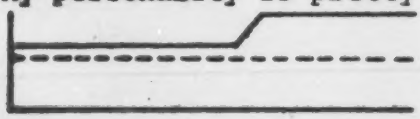
Gould's research shows graphically some of the aspects of these changes of consciousness. Figure 6 shows questionnaire items answered differently by people in different age groups. Gould uses these differences in response to mark off the time boundaries of adult life periods. Comparing the curves for all items, there are suggestions of seven distinct age periods, each with characteristic concerns, which are identified briefly in Figure 5. The age breaks reflect averages which include considerable personal variation. How these changes are expressed and dealt with

FIGURE 6

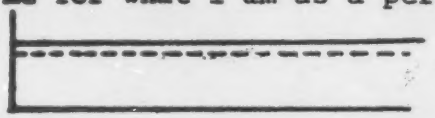
Critical Concerns Which Differentiate Gould's Life Phases

Sample Curves Associated with the Time Boundaries of the Adult Life Span

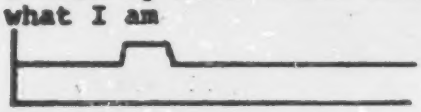
1 My personality is pretty well set



2 I wish that people would accept me for what I am as a person

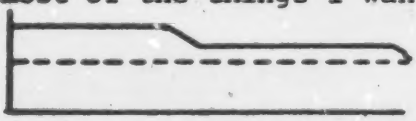


3 I wish my mate would accept me for what I am

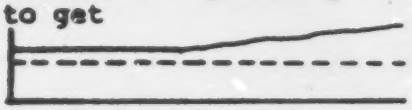


4 I would be quite content to remain as I am now

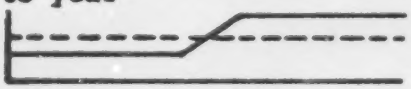
5 There's still plenty of time to do most of the things I want to do



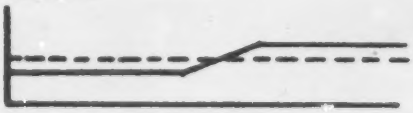
6 I try to be satisfied with what I have and not to think so much about the things I probably won't be able to get



7 Life doesn't change much from year to year

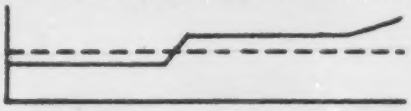


8 Too late to make any change in my career

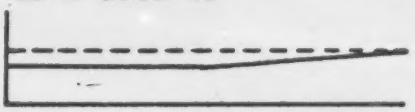


9 I don't make enough money to do what I want

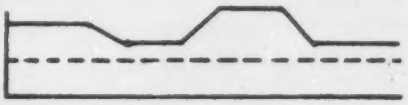
10 My greatest concern is my health



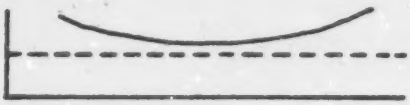
11 I can't do things as well as I used to



12 I like a very active social life



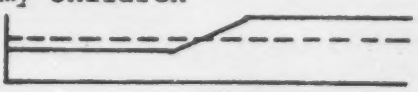
13 For me marriage has been a good thing



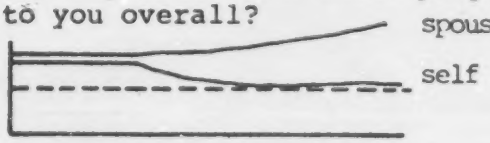
14 How important are these people to you overall?

15 My parents are the cause of my problems

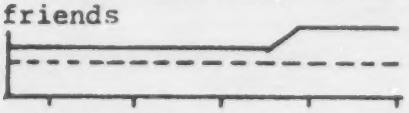
16 I regret my mistakes in raising my children



17 How important are these people to you overall?



18 I would feel lost without my friends



Source: Gould

varies considerably from person to person; it's what one faces, not how it's faced, that Gould sees as the common denominator. This points to a common characteristic of life phase theories; they identify salient issues that are common on a large scale to adults in a similar life phase. How people face them is more a question of developmental stage and perhaps a reflection of personal style, to call to mind two other domains of analysis.

In connection with education, Gould's most provocative finding is that adults seem to have an ever-increasing need to win permission from themselves to continue developing. This requires persistent and thoughtful confrontation of how people feel about the realities of their lives, and a progressive substitution of their own conception of adulthood for their childhood legacy. He explains it this way:

> The prevailing concepts of adulthood have obscured...the fact that an adult needs to engage in any kind of continuing growth process at all. Like a butterfly, an adult is supposed to emerge fully formed and on cue, after a succession of developmental stages in childhood. Equipped with all the accouterments, such as wisdom and rationality, the adult supposedly remains quiescent for another half century or so....Childhood delivers most people into adulthood with a view of adults that few could ever live up to. A child's idealized image of an adult can become the adult's painful measure of himself. Without an active, thoughtful confrontation of this image, the impressions of childhood will prevail. An adult who doesn't undertake this thinking and confrontation lives out his or her life controlled by the impossible attempt to satisfy the magical expectations of a child's world.
>
> (Gould, 1975, p. 78)

It is possible that education can, in many ways, help legitimize for adults their continuing need to grow and learn, and can be a way of raising these needs to consciousness.

SEX DIFFERENCES IN SUCCESSIVE LIFE PHASES

Many of the unresolved questions about life phase have to do with sex differences. Are women's life periods different from men's? Are women's patterns of progression through life phases different? Are the developmental tasks different for men and women? Of the three domains in this conceptual framework, life phase is probably the most susceptible to socially defined sex differences. There is evidence that the developmental needs and tasks of men's and women's life phases are often conflicting and dissynchronous.

Sheehy (1974) looks at Levinson's work for evidence of women's and couple's development. She finds an unevenness in development between the sexes, and oppositional needs that create conflicts among couples at the same life periods. At the age 30 transition, for example, men's and women's needs are likely to produce a "no-win" situation, as they also are for couples in the mid-life transition. A woman in her early thirties may be ready to "get into the adult world" if she has stayed behind at home, or ready to leave career for

children if she remains childless. In either case, she's at odds with her husband's cycle. Levinson speculates that given the complexities of woman's development, it is probably not possible for a woman to work out a combination of two careers -- domestic and extrafamilial -- until 30 or 35. This is a sobering thought. How do the individual needs of members of a couple clash or mesh with changing life phases? What does this mean for the individual development of both members of a couple, and for the dynamics of couple relationships? Are there different developmental tasks for single women and men? These are unresearched questions.

Lowenthal, Thurnher and Chiriboga (1975) have recently published the results of an extensive cross-sectional study of blue and white collar middle-class Americans for four 'stages' in their lives: high school seniors, ages 16-18; young newly weds, ages 20-38; middle-aged parents whose youngest child was a high school senior, average age 50; and older people about to retire, average age 60. The researchers chose these groups because they were facing what they perceived as major life transitions, or in Levinson's terms, marker events. They sought to identify characteristic coping styles and strategies of adaptation.

The most significant and striking finding is that there are large sex differences in coping styles and strategies among couples who could be hypothesized to be at the "same" life phase. There are convergences between the sexes at the

extremes (high school seniors; pre-retirees) and dramatic divergences in the middle (newly-weds, middle-aged parents). The most critical or stressful periods are different for men and women. Additionally, women consistently report more problems and less satisfaction with their methods of coping, although the intensity of dissatisfaction varies across life periods. The similarity between men's and women's stance at the ends of life and divergence in the middle probably reflects the considerable differences in sex roles prevalent in middle-class and lower middle-class families, but that is not entirely the answer. The dramatically criss-crossing trajectories of men and women at successive stages lead the researchers to hypothesize that their data may reflect different types of developmental change, as well as different scheduling.

This study is important because the other work on life phase and, for the most part, the research on developmental stage, over-samples privileged segments of the population. Lowenthal and her colleagues deliberately chose to study cohorts in the middle and lower middle-class to counteract what they saw as the privileged bias of self-actualization studies. One problem in interpreting these results is that Lowenthal's definition of life phase does not coincide with that of the other researchers so far. Their approach is sociological and quantitative; they compare measures

of life style, self-concept, value orientation, friendship orientation, family configurations, stress, and time perspective across the four groups. They pay little attention, as do Gould, Erikson and Levinson, to defining the characteristics of each 'stage' as a stage in a sequence of life transitions.

Another difficulty in interpretation is that some differences ascribed to age, or to subgroups within age are undoubtedly confounded by differences in developmental stage. That is, this study examines simultaneously, in Gould's terms, both what is faced by these four groups of adults (a life phase issue), and how they face it (a developmental stage concern, as these stages reflect character and personality organization). An alternative way to interpret these findings is as an explication of the coping styles of average persons of similar ego stage at four different life phases. Because the sample was homogenously middle and lower middle-class, ego stage is probably roughly held constant at the conformist and self-aware levels on Loevinger's measure of ego development. Lacking ego stage data, I can support this hypothesis only by impressionistic evidence; however, my intent here is to indicate the complexity and overlapping nature of these domains of analysis.

IMPLICATIONS OF LIFE PHASE FOR EDUCATION

The idea of life phase contributes most to our understanding of the larger, underlying issues which adults bring to educational experiences of all types and varieties. From Gould's work, we know that adults need to win permission from themselves to continue developing or to change their perspective. Education can legitimize this continued development in many ways, both formal and informal. Erikson identifies the major psychological issues for adults -- intimacy (love, affection), generativity (work), and integrity. His work indicates the centrality of one's concept of identity in both personal and career development. This has obvious implications for vocational and professional education for adults. The literature on career development, for example, formerly assumed that career choices were made mainly by adolescents in high school and college, and made just once; this is increasingly not so. It is useful for both organizers and participants to know that adults making mid-career shifts or changing careers can be expected to question their identity; in fact, entering a training program they might be expected to revisit all of Erikson's crises, starting with trust versus mistrust and ending, hopefully, at generativity. Thus, Erikson's developmental crises can be seen as natural and expected phases of adaptation to an educational program whose function is, at least in part, enabling people to make life transitions. Here, Levinson's concept of life

structure adds insight. "Going back to school" usually involves major changes in life structure; surely it helps to be aware that this change is most likely associated with neglected aspects of self that the person is trying to reclaim. Sheehy's and Lowenthal's concern for the criss-crossing trajectories in men's and women's development also raises important issues. If women's development is different in either quality or scheduling, what does this mean for women's colleges, for agencies that serve women, and for educational institutions and programs that routinely mix the sexes?

In sum, to the extent that education is, or can be, a factor influencing the quality of life for adults, it seems essential that educators pay attention to life phase concerns. "Paying attention" can vary, of course, from informal acknowledgement of students' concerns to the design of orientation sessions, workshops, changes in courses or teaching methods, the forming of support or counseling groups -- in fact, any institutionally legitimized process of self-examination. To the extent that the developmental tasks of life phases are influenced by socialization processes, an educational institution or program may have enormous impact. Education involves norms and expectations; most people look to teachers as guides and models. The socialization process set in motion and "psychological contract" developed with students can be tremendously important to personal

development if it reflects an understanding of the personal issues underlying participation.

An understanding of life phase highlights the personal uses of education: what is education good for? For whom? And at what points in life? Because a person's interpretation of the meaning of his or her life and the problems that need solving shift with life phase, these transitions are likely to generate new needs and uses for education. For example, in Sheehy's "pulling up roots" period (age 16-22), colleges and universities and the army are the major social institutions that help adolescents break away from their families and establish separate identities. A "provisional adult" (age 22-29) is more likely to be interested in job-related education, whereas someone undergoing an "age 30 transition" (age 29-32) is frequently seeking redefinition of life aims or new career directions, often in the guise of returning to college for a master's degree, or taking yoga at a community adult education center. A person who is "rooting" (age 32-29) may be engaged in upgrading professional skills or pursuing valued hobbies; at "mid-life transition" (age 39-43), there is need for social support for widespread reexamination and questioning. With "restabilization and flowering" (age 43-50), a person is likely to seek opportunities to pursue neglected interests or altogether new interests, more social and avocational than vocational.

With retirement, there are further opportunities for recreation and leisure, and aging brings needs for social contact and personal support.

Although there is no systematic evidence, it seems probable that people's use of education, both formal and informal, in resolving developmental tasks or mediating transitions is differentially related to age, sex, occupation, social class, and personal inclination. This fact, if it is a fact, raises major questions for educators, particularly for national and institutional policy. Middle-class and professional groups traditionally make the most use of formal education, while lower class adults and people with socially-identified needs (e.g., alcoholics, the unemployed) tend to receive what could be called educational programs from social service agencies. The sparse data on this matter is intriguing. Statistical analyses published by the National Center for Educational Statistics (Gilford, 1974) show that adults enrolled in educational programs across the broad range of "postsecondary education" have high levels of education compared to the general population. Medsker's (1975) study of the characteristics of students in a cross-section of non-traditional college programs shows that by and large the "nontraditional" students are older students with the same characteristics as traditional ones: middle-class and profesionally oriented.

It is interesting to speculate on the ways life phase issues and transitions are influenced by social class. College, for example, is a critical mediating institution for middle-class youth leaving the family. What are the mediating mechanisms for a young man or woman who must enter the labor force immediately after high school (or who drops out), someone who perhaps continues to live and work within an extended family? If the developmental tasks of life phases cut across the population -- and they must to some extent or the concept is too broad to be meaningful -- then why is it that educational institutions serve some groups and not others? With the increasing age of the United States' population, should there not be more institutions that serve older adults? These questions point to classic policy makers' dilemmas. When and how and for whom should services be provided? In a decentralized educational and social service system, whose responsibility is it to serve whom? And why? How much responsibility should be left to individual adults, and how much assumed by society?

One obvious and practical use of life phase research lies in informing program design and institutional strategy -- for example, in identifying potential new clients for educational services, in conceptualizing new services, and in re-designing delivery mechanisms developed for a different clientele. Some colleges seeking new clientele, for example, have been turning with considerable success to senior citizens as potential students. External degree programs, week-end

colleges, competency-based professional training and other mechanisms of "nontraditional" higher education appeal to adults with work and family commitments who cannot study in the traditional manner. Within and outside of institutions, it is possible to identify groups that are more likely than others to be "at risk" undergoing life transitions, and to develop short-term counseling, career development or personal support groups to help ease the transition. For example, many colleges have such support systems for older women who are returning to school; other groups might need similar support.

A final and related point is that we do not have very good information on the extent of adults' demand for education. There have been a few attempts to establish national base-line and trend data regarding magnitude of adult participation, but most participation research has investigated age and social class correlates of participation from a sociological perspective. The focus is now shifting toward attempts to identify the psychological and attitudinal variables influencing participation (Dickinson and Clark, 1975). A study that looked in-depth at adults' demand for and differential use of education from the theoretical perspectives of life phase, developmental stage, and learning style could be potentially extremely useful.

One of the most salient insights afforded by life phase theories and research lies in the recognition of anxiety,

disequilibrium and transition in the lives of adults who teach, study and administer. If people are aware that others share their confusion, if they perceive disequilibrium as part of a normal and expected growth process -- if they have labels for the internal chaos -- this can alleviate anxiety and improve potential learning.

Harold Hodgkinson (1974) has taken Levinson's formulation of life phases and identified life phase issues in college faculty members' and administrators' lives. For example, he sees younger "provisional adult" faculty (age 22-29) as engaged in career testing and dream-building, perhaps with aid from an older faculty person who serves as a mentor. "Settling down" faculty (age 30-39) are concerned with publication and research, with gaining a ranked position, learning the committee system for prestige and autonomy, gaining tenure, and are becoming involved in the activities of national learned societies or professional associations. "Mid-life" (age 39-43) brings reassessment of one's goals, perhaps downward revision, and a last chance to leave academic teaching for some other career. "Restabilization" (age 43-50) is likely to involve renewed commitment to the academic institution, satisfaction with one's status, enjoyment in playing a mentor role toward younger faculty, and the establishment of friendship groups and interests outside of teaching and research. Hodgkinson describes a similar progression for adminis-

trators, illustrating the opportunities and problems which changes in life phases bring to their job performance. He calls attention to the central importance of recognizing that crisis and reorientation are the vital centers of personal growth.

> It would seem to be more useful to utilize Levinson's work, and our speculations on its implications for higher education, as a diagnostic tool -- helping us to understand individuals in the formation and revision of their goals, helping to mediate their conflicts with institutions, other persons, and with themselves, and above all, helping them to realize that some crisis and reorientation are vital for continued personal growth; without it we continue to live last year over again. With it, we can begin to understand the oriental definition of crisis -- a 'threatening opportunity.'
>
> (Hodgkinson, 1974)

Hodgkinson's formulation is apt, but incomplete. He fails to separate the personal and interpersonal uses of insight from institutional uses. Apart from its influence on interpersonal perception and interpersonal relationships, how does one operationalize understandings of the kind Hodgkinson describes? This question can be asked of all the "understandings" that research and developmental theory provide. It is not an easy question to answer. Although I have suggested some institutional implications, there are many unanswered questions with respect to anything that might be described as implementation of the idea:

- Since the theories aren't integrated or complete, how can we use them?

- If developmental tasks and marker events of life phase differ by life style, social class and personal idiosyncrasies, how do we identify life phases?

- There are no current instruments for measuring life phase, according to any theory. Can age be used as a global proxy? (It probably can, in that if an institution serves a new age group the personal issues underlying participation will probably be different. But which issues, in what developmental sequence?)

- The current state of research leaves many unanswered questions concerning life phase. If they are age-linked but not universal, are there sufficient commonalities to warrant program changes? If idiosyncrasies of personality, life style and subculture affect the substance and timing of life phases how does one use the concept? How does one deal with the unknown differences between men's and women's life periods?

- On a large scale, the age distribution of our population provides us with information, albeit hypothetical, about the demand for particular kinds of education. With decentralized systems for edu-

cation and social services there is no organized response to this demand. How then should institutions respond?

- Although it might be socially useful to identify groups "at risk" and offer services, this can also be patronizing, and provide services that are not wanted or that create dependency. How can we use this concept so that we don't create just another label (Hodgkinson calls them "aged boxes") for classifying adults?

- How much does education relate to personal development or to quality of life? How much should it?

- What role does an educational institution or program play in mediating life phase transitions? What role is appropriate?

- Who in an institution should be responsible for identifying the larger issues of life phase, and organizing instruction, socialization, and counseling to take them into account?

- How do we institutionally legitimize personal development, or the idea that adults can use education for support in life transitions?

Once one leaves the areas of understanding where interpersonal perception and interaction are key, and tries to

think of institutionalized or institution-wide implications, these questions arise. This may point to the most powerful use of the idea, which is as an idea. If knowledge of adult life periods -- just the fact that transitions exist -- were common knowledge, people might expect them, plan for them, and act with more wisdom themselves and with others. On the other hand, educational institutions, whose specialty is fostering learning, have a tremendous responsibility to be conscious of the assumptions underlying their ways of organizing instruction and the socialization processes they perpetuate. What, for example, is the message if there is no age-box past forty on the application forms?

CHAPTER III

THE DOMAIN OF DEVELOPMENTAL STAGE

The concept of structure is central to the idea of developmental stage. A stage is an ideal-typical construct which describes different psychological organizations, or basic mental structures, at different points in one's development. Different stages represent different ways of ordering the world -- of actively structuring one's responses in ways that are themselves structured in shapes and patterns that may not be recognized by the person involved, but can be recognized by others. Current stage theories offer detailed maps of cognitive, emotional, interpersonal and ethical development; as such, they provide one way of determining "where people are at," at least psychologically speaking. In this lies their tremendous relevance for education.

The most fundamental aspect of the construct lies in the assertion that developmental stages represent qualitatively different frames of reference for interpreting and responding to daily experiences. This means that we do not all live in the same perceptual, intellectual and interpersonal world, and that "social facts" and "objective environments" are not facts or objective at all, but subjective phenomenon organized in stage-related ways. Earlier stages in most developmental

sequences describe a movement outward from an egocentric orientation toward the world; later stages describe movement toward increasing self-awareness and a broader, more complex understanding of social phenomena. Cognitive ability becomes more complex with upward stage progressions. These progressions are provocative because they seem to represent unintended consequences of education, if not intended consequences, as evidenced by a correlation of higher developmental stages with increasing levels of education.

Most of the research on developmental stages has been done within the tradition of cognitive developmental, or structural, psychology. In Jean Piaget's classic (1960) definition, stages describe an invariant sequence of mental organizations which constitute qualitatively different frames of reference toward experience. They are hierarchically integrated; that is, subsequent stages incorporate and transform earlier stages, and they represent "structured wholes" or thought-organizations underlying one's basic approach to the world. Development in Piagetian terms (1967) is seen as progressive equilibration from a lesser to a higher state of equilibrium, through mental structures that are continually undergoing transformations and moving toward more complex levels of differentiation, integration, and stability. Individuals assimilate experience to an extant structure and then accommodate the structure (as a result of perceived

discrepancies between experienced events and thought structures to interpret them) through transformations and recombinations which result in a new and more differentiated structuring of experience. When considerable numbers of elements in a structure have been transformed, a new structure of "stage" of development has been reached.

Piaget's research has been done with children, not adults, and his focus has been on the development of children's logical thinking and moral judgment. Because I want to include the areas of emotional, experiential and interpersonal development in the domain of developmental stage, I use a broader definition of 'stage' than that adopted by structural theorists. Piaget's ideas are, nevertheless, fundamental touchstones for examining the assumptions of the construct.

There are many stage theorists; each deals with a somewhat different strand of development. I discuss in some detail Lawrence Kohlberg's stages of moral reasoning, William Perry's sequenced positions of intellectual and ethical development, and Jane Loevinger's levels of ego development. Additionally, Harvey, Hunt and Schroder (1961) have identified a sequence of conceptual development and personality organization which parallels Perry's positions, although it was developed independently. Selman (1973) has identified stages of social role-taking that probably precede Kohlberg's moral stages as "necessary but not sufficient" preconditions for

stage change, Fowler (1974) has identified stages in the development of faith and religious orientation (which also parallel Kohlberg's stages), and Broughton (1975) has conceptualized stages of epistemological development which are compatible with those of the other theorists. Although various theorists focus on different aspects of development, and predictably differ somewhat in word usage, definition of terms, research methodology and scoring systems, their approach is congruent. There is reasonably satisfactory evidence that they are describing and independently verifying related developmental progressions.

The evidence that developmental stages "exist" lies in the fact that people hypothesized to be at different stages react differently to the same experience, and some of those differences are predictably patterned. There is also longitudinal and empirical verification for various developmental progressions. This evidence is substantial, although not unquestionable. Kohlberg, for example, has longitudinal data for a single set of subjects for over 18 years. No one has skipped stages; what seemed to be regression to Stage 2 on the part of bright conscientious high school boys who were in their first years of college and going from Stage 4 to Stage 5 was solved by the creation of Stage 4-1/2 (relativism). Perry's scheme was derived from an eight-year longitudinal study of two groups of Harvard undergraduates.

Loevinger's progression of ego levels was constructed with cross-sectional data from a projective sentence-completion test; she and her colleagues used elaborate boot-strapping procedures over a ten-year period, alternating between clinical judgment and empirical verification of responses. Thus, while not everyone's work was with "adults"-- and this is an agenda for future research -- there is a substantial body of scholarly work supporting the notion of developmental stages.

There is a persistent argument among researchers about how to assign and interpret stage scores -- whether a score should represent a person's highest possible level of functioning, or modal level, or level of core functioning consistent with behavior. Theorists make these decisions differently, so scores and 'stages' are not exactly comparable across theories. It is true that people's responses on any stage measure cannot be consistently assigned to only one stage. Thus, it is probably more accurate to speak of individuals having a modal stage, or a level of core functioning, which is possibly different for different strands of development. A moral reasoning protocol, for example, usually shows three stages: a dominant stage, a stage which a person is leaving, but still uses, and a stage he or she is moving into but which has not yet crystallized (Kohlberg, 1969). People seem to prefer reasoning or responses at the highest

level which they can understand, which is often one stage ahead of their own modal stage. People at higher stages apparently have a wider repertoire of mental structures through which to interpret experience; a person at lower stages is unable to comprehend the ideas, motives and personality dynamics of persons at higher stages. Instead, he or she reinterprets them into less-differentiated conceptions. For example, children asked to role-play family situations with role descriptions higher than their own modal stages reinterpret the role-play parts to their own stages (Blasi, 1971). "Fakeability studies" using Loevinger's measure for ego development (Loevinger, 1973), have shown that you cannot fake a freely constructed response more than a half stage higher than your own, although you may score higher by choosing pre-constructed items from a multiple-choice battery. This is not merely a matter of measurement; a developmental stage, at least theoretically, represents a structural potential or constraint on understanding and action.

Another persistent argument concerns the relationship of stage-related cognition and interpretation to one's daily actions; for example, one's tested level of moral reasoning to one's practice of moral behavior. With moral development there is no one-to-one correspondence between judgment and action, but it seems clear that a person's actions are framed out of stage-related patterns of thinking. The two are definitely related. With Loevinger's measure of ego develop-

clear-cut, as her measure and scoring system comes closer to tapping behavior. However, knowing someone's developmental stage does not allow one to predict behavior, except on the level of interpreting patterns of behavior, and their meaning.

What causes development, or stage change? Stages are constructed by each person through an active process of making meaning from experience. It is not clear why for some people, at some point, development stops or why all adults do not move on to the higher developmental stages. One can posit development as a personal act of will which involves overcoming considerable internal defenses, both cognitive and emotional, tending toward equilibrium or the status quo. A developmental stage is a powerful and self-reinforcing frame of reference. The environment also influences potential for development. Poverty, hostility and deprivation can set ceilings on growth. What "stops" development, as well as what fosters it, is an unresolved question. Development apparently stops when individuals do not have the disequilibrating experiences which lead to formulation of higher stage structures, or when they "have" the experience but cannot or do not choose to use it to change their basic way of experiencing the world. But this is only a partial answer to a complex question.

It is also an open question as to how developmental stages are related to age in children and in adults. The research with children is specific regarding this relationship; with adults it is not. Can schemes initially constructed to

describe children's development (e.g., Piaget, Kohlberg, Selman) be applicable for adults? Adults and children often have similar personality traits, but what are the essential differences between a ten-year-old child at Kohlberg's stage of instrumental exchange (Stage 2) and an adult at the same stage? When do certain stages become dysfunctional for adults?

Loevinger sees ego development as both a normal developmental sequence for children and a characterology or typology which shows individual differences among adults in a given age cohort. Her descriptions of the stage progression in ego development start with "the infant," move to "the child," and then, at the conscientious stage (Stage 4), shift to "the person" (Loevinger and Wessler, 1970). There are many adults at the lower stages, of course; just how they are different from children at those same stages is unclear.

Again, what causes stage change? We have only preliminary answers. Piaget postulates that stage change depends upon experience; in particular, discrepancies between one's expectations and experienced events. Some moderate discrepancy is believed optimal to promote development. A child shifts into a new cognitive stage through a series of experiences in which his expectations are disconfirmed; e.g., a variety of objects do not float or sink as he predicts, and he cannot use his old ways of thinking to explain a new phenomenon (Inhelder and Piaget, 1958). Kohlberg sees role-taking opportunities

intellectual stimulation, responsibility for decision-making, exposure to individuals with conflicting viewpoints, exposure to reasoning at the "next stage up," and living in a world or community which is perceived as fair, as preconditions for adults to change stages of moral judgment (Kohlberg, et al., 1974). Lasker (1974) sees stage change in ego development as proceeding through a succession of "microchanges," small realizations about oneself that accumulate over a period of time and can, after a period of personal disequilibrium, form into the personality pattern of the next stage. This conclusion comes from formative research on the impact of an ongoing training program designed to take adults through a series of experiences leading to microchanges and then ego-stage change.

Of the three constructs in this analytic framework, the construct of developmental stage is by far the most value-laden. The structuralists' definition of stage as invariant and hierarchical raises in some minds the spectre of an elitist theory embodying values at odds with their own. What evidence is there that higher stages are better? Kohlberg maintains that higher moral stages are better because they are logically more adequate, they embody a natural and universal human progression, and movement to higher stages is rehabilitative and leads to more consistent and responsible behavior. He also maintains that there is clear evidence that

persons reasoning in a more morally mature way act in a more mature way. However, most of his work with adults has been with prison inmates at preconventional levels.

For example, studies in the United States and other countries indicate that criminal offenders score remarkably lower on Kohlberg's measures of moral judgment than non-offenders of the same social background. The majority (7[illegible]%) of non-criminal adolescents and young adults are at Stage 3 or 4, while the majority of adolescent offenders are at Stage 1 or 2. Higher stage people can, of course, be imprisoned for their moral principles: for example, Mahatma Ghandi, Socrates, and Martin Luther King. Studies of the effects of moral judgment interventions in prisons appear to show that inmates who have reached conventional stages (Stages 3 or 4) in moral judgment are less likely to be reincarcerated than preconventional (Stage 1 and 2) inmates (see Kohlberg, et al., 1974, pp. 27-28).

It is probably true that it is dysfunctional for an adult in our society to have a personality organization or mentality below that of Kohlberg's conventional stages (Stages 3 and 4) or Loevinger's conformist stage (Stage 3). After that, agreement tends to break down. The higher stages involve understanding and questioning social norms and values and sometimes taking individual stances against one's social group. This is not a universally respected value although many people tend to espouse it. Loevinger believes that those

who remain below the conformist level beyond childhood are probably maladjusted, many undoubtedly so in their own eyes. However, she also cautions that many self-protective and opportunistic (Stage 2) persons are quite successful in our society, and it is faintly presumptious to call them maladjusted. In the end, she maintains that the higher ego stages are not necessarily better in the sense of conveying more happiness or greater adjustment to life's problems; she does see them as representing greater adequacy in coping with progressively deeper and more complex issues and problems, both intellectual and personal (Loevinger and Wessler, 1970).

A final unsettling question before we proceed to examine a few theories in detail involves suspected and cross-cultural relationships between social class, amount of education, and stage of development. Kohlberg's evidence for cross-cultural universality is based on studies in Mexico, Taiwan, Turkey and Great Britain (Kohlberg, 1969); he unequivocably claims universality for his stages of moral reasoning. Although Loevinger is much less quick to claim cross-cultural validity for her construct of ego development, Lasker has unpublished data for Curacao that shows that society stratified by income and education in proportion to increasing ego levels. He is currently collecting data which is expected to show that rank and responsibility in a large industrial corporation are stratified by ego levels, with increasing levels

of ego development related to competence in handling supervisory and managerial positions. There is no such data for the United States, but I suspect that in gross statistical terms we would find the same stratification. These relationships, interesting to be sure, have sobering implications for education.

For our immediate purpose it is significant that most adults do not reach the higher stages in any of the developmental schemes. Although Piaget ascribes the development of formal operations to late adolescence (12-15; for some, 15-20 years); Blasi shows that many adults do not reach formal operations, at least on Piagetian tasks. Loevinger sees the average American as a "conscientious conformist," a transition (from Stage 3 to Stage 4) that appears to be modal for some students during their first two years of college. Kohlberg assigns his Stage 4, or "authority and social order maintaining orientation," as the modal stage for most adults. Because adults do not automatically reach the higher stages, even the "conventional stages," and because stage change is possible in adulthood, these facts have powerful implications for education.

KOHLBERG'S STAGES OF MORAL JUDGMENT

Kohlberg's stages of moral reasoning represent studies of children, adolescents and adults over a 20 year period.

Longitudinal studies have verified that individuals pass through the stages sequentially. There are three levels of moral development, each of which has two stages embedded in it. The preconventional level is characteristic of children under age 9-11, and of a majority of adolescent criminal offenders. At this level the moral rules and values of society are understood only as "do's" and "don'ts" associated with punishment. The conventional level is the level of the average adolescent and adult who understands, accepts, and attempts to uphold society's values and rules. The post-conventional level is the level at which customs and social rules are critically examined in terms of universal human rights and duties and universal moral principles (see Figure 7, following).

Although Kohlberg's stance was originally "naturalistic," there is evidence that efforts to promote stage change can be successful. A series of studies by Moshe Blatt (1971; Blatt and Kohlberg, 1971) showed that moral discussion groups with high school students could promote development by about one half-stage on Kohlberg's scoring system. It is important to note that these are changes in reasoning, not in behavior, although changes in reasoning are believed to be preconditions for consistent behavior change.

The success of these discussion groups has led Kohlberg and his associates to consider what might be done within elementary and secondary school social studies classes to promote moral development. A first principle of their approach is that moral development is <u>not</u> promoted through direct

teaching and instruction.

> Our research evidence indicates that the child generates his own level of thinking and changes gradually. The task of the teacher is to facilitate the process of change. Studies (Rest, 1971; Rest, Turiel and Kohlberg, 1969) suggest that it is not possible to get children to comprehend stages much higher than their own, much less to use them spontaneously. All children were able to represent correctly all stages below their own as well as those at their own levels, and some children were able to do this for the stage directly above their own also. Almost none were able to comprehend or translate reasoning two or more stages above their own. Those children able to comprehend higher stages also showed some spontaneous use of these stages (25%) in the pretest interview. Comprehension of a higher stage, therefore, reflected the child's natural movement toward this next stage period. Success in stimulating change to a higher stage requires (a) helping children to understand a higher stage of reasoning, and (b) facilitating their acceptance of that reasoning as their own, with the spontaneous use of it in new situations.
> (Kohlberg, Proceedings, p. 42)

Instead, moral development is facilitated through one-to-one interactions in which the teacher's verbalizations are one step above the level of the student. The teacher's primary task, according to Kohlberg, is to help the student (a) focus on genuine moral conflicts; (b) think about the reasoning he or she uses in solving such conflicts; (c) see inconsistencies and inadequacies in his way of thinking; and (d) find means of resolving such inconsistencies and inadequacies. Discussing moral dilemmas facilitates this process. The focus for change is on thinking; Kohlberg's stages represent progressively more adequate conceptualizations of morality.

FIGURE 7

Kohlberg's Stages of Moral Judgment

Classification of Moral Judgment
Into Levels and Stages of Development

Levels	Basis of Moral Judgment	Stages of Development
I	Moral value resides in external, quasi-physical happenings, in bad acts, or in quasi-physical needs rather than in persons and standards.	Stage 1: Obedience and punishment orientation. Egocentric deference to superior power or prestige or a trouble avoiding set. Objective responsibility.
		Stage 2: Naively egoistic orientation. Right action is that instrumentally satisfying the self's needs and occassionally others'. Awareness of relativism of value to each actor's needs and perspective. Naive egalitarianism and orientation to exchange and reciprocity..
	(Preconventional morality)	
II	Moral value resides in performing good or right roles, in maintaining the conventional order and the expectancies of others.	Stage 3: Good-boy orientation. Orientation to approval and to pleasing and helping others. Conformity to stereotypical images of majority or natural role behavior, and judgment by intentions.
	(Conventional morality)	Stage 4: Authority and social-order maintaining orientation. Orientation to "doing duty" and to showing respect for authority and maintaining the given social order for its own sake. Regard for earned expectations of others.
III	Moral value resides in conformity by the self to shared or shareable standards, rights, or duties.	Stage 5: Contractual legalistic orientation. Recognition of an arbitrary element or starting point in rules or expectations for the sake of agreement. Duty defined in terms of contract, general avoidance of violation of the will or rights of others, and majority will and welfare.
	(Postconventional morality)	Stage 6: Conscience or principle orientation. Orientation not only to actually ordained social rules but to principles of choice involving appeal to logical universality and consistency. Orientation to conscience as a directing agent and to mutual respect and trust.

Source: Kohlberg, 1967, p. 171.

Kohlberg sometimes adds other stages. Stage 0, Egocentric Judgment, describes a state in which judgments are made on the basis of what an individual likes and wants, with no conception of rules and obligations independent of personal wishes. Stage 4 1/2, is a stage of relativism characteristic of the transition between convantional and postconventional morality. Stage 7, which is at present hypothetical, involves the adoption of a cosmic and religious (in the broad sense) perspective, parallel to Erikson's eighth stage of integrity.

Within the last five years Kohlberg and his associates have been involved in interventions in schools and in prisons which are designed to promote moral development. At the heart of these interventions is the creation of a "just community," in which democratic principles govern community life, and rules are set through widespread and continuing discussion of what is fair in particular situations. Here the hypothesis is that moral stage change is related to exposure to social environments perceived as operating according to principles of justice more adequate than one's own, to opportunities for social role-taking, and to the cognitive conflict involved in making decisions collectively and in assuming responsibility for implementing group decisions. The idea is to create a moral atmosphere or "just" environment which will be perceived by all as fair, although in different terms depending on staff and participants' moral stages. Evidence is preliminary but some stage change has been measured, again about a half-stage in magnitude.

The intervention studies illustrate how a developmental stage acts as a frame of reference for one's social environment. Scharf (1973), for example, has traced prison inmates' reactions to treatment programs by their stage of moral reasoning, and found that women inmates of a model cottage perceived the "same" cottage environment differently, in stage-related ways. Preconventional (Stage 2 and below) inmates missed the major assumptions of democratic group structure and reinterpreted

them into lower stage categories of dyadic exchanges among individuals; "mixed (Stage 2 and 3) inmates evaluated the cottage environment in terms of interpersonal relations and mutual expectations (niceness, concern); conventional (Stage 3 and 4) inmates had a more critical perspective derived from an analysis of the program's merits. They were concerned about the political structure of the cottage, outside social and political influences, and with securing effective help to keep them from returning to prison. Perry, whose work is described in the following pages, found a similar result with Harvard undergraduates. He could not tell from students' reports of their college experience that they were talking about the same course or the same college. Students' interpretations of the "same" experience differed widely, depending upon their place in his developmental sequence.

The task of creating a "just community" to consciously foster development among people at different stages is a difficult one, and there are unresolved questions about the leaders' roles and strategy. If the community makes decisions democratically, then the majority's notion of fairness prevails. Do staff members, presumably at higher stages, have a responsibility to present their own viewpoints or to support the community views that represent one stage up? How do they, or can they, create allegiance to community ideals in the face of widespread injustice outside the community? Can one establish a model "democratic" cottage and ignore the authoritarian

ethos of a prison? Can one establish moral discussion groups for students and ignore their concerns about justice within the school setting? In the long run the answer is no, but the questions create dilemmas for the would-be practitioners which are not resolved by developmental theory.

PERRY'S FORMS OF INTELLECTUAL AND ETHICAL DEVELOPMENT

Perry's progression of intellectual and ethical development describes nine way-stations on a journey from a commitment in a conceptually simple world of absolutes, to a more considered commitment in a world of relative and contingent knowledge and values. Perry's original intent was to study the impact on students of twentieth-century relativism; his developmental sequence traces the impact of a liberal arts education where "liberal arts" means the more or less deliberate teaching of the procedures of relativistic thought, assuming a diverse and pluralistic culture.

Perry's scheme (see Figure 8) was derived from open-ended interviews with two groups of Harvard undergraduates, each studied longitudinally over a four-year period as they progressed from freshmen to seniors. Students were asked how they construed their college experience (e.g., "Why don't you start out with whatever stands out for you about the year?), and the codification represents the forms (structures) rather

than the particulars (content) of their replies. Not everyone progressed smoothly through these positions; there are counter-positions of retreat, temporizing and escape, as Figure 8 shows.

Perry's scheme is based on Piaget, but it is not wholly Piagetian. Perry adds an "advanced period" (he would call it the "period of responsibility") to Piagetian studies so far published. Piaget's studies show that formal operational thought (adult thinking, or the ability to think about thinking) is established at 12-15 years, or for some from 15-20. Piaget believes that one does not become formally operational in all areas of intellectual functionings, however; one specializes in areas of aptitude or professional orientation (Piaget, 1972). Although Perry sees the first half of his scheme as reflecting the motoric, cognitive and moral "decentering" portrayed in each of Piaget's other periods, the second half, which describes the development of a personal style or equilibrium in Commitment (Positions 5-9), seems qualitatively different. The shift is away from spatial-cognitive restructuring to emotional and aesthetic assessments (Perry, 1968). He speculates that his first five positions may be vertical in Piaget's terms, with the last few showing what Piaget calls horizontal décalage. This points to a model of growth and development that is not linear but represents a spiral or a helix.

FIGURE 8

Perry's Positions of Intellectual and Ethical Development

MAIN LINE OF DEVELOPMENT

Position 1: Basic Duality. *The student sees the world in polar terms of we-right-good vs. other-wrong-bad. Right Answers for everything exist in the Absolute, known to Authority whose role is to mediate (teach) them. Knowledge and goodness are perceived as quantitative accretions of discrete rightness to be collected by hard work and obedience (paradigm: a spelling test).*

Position 2: Multiplicity Pre-Legitimate. *The student perceives diversity of opinion, and uncertainty, and accounts for them as unwarranted confusion in poorly qualified Authorities or as mere exercises set by Authority "so we can learn to find The Answer for ourselves."*

Position 3: Multiplicity Subordinate. *The student accepts diversity and uncertainty as legitimate but still temporary in areas where Authority "hasn't found the Answer yet." He supposes Authority grades him in these areas on "good expression" but remains puzzled as to standards.*

Position 4: Multiplicity Correlate or Relativism Subordinate. *(a) The student perceives legitimate uncertainty (and therefore diversity of opinion) to be extensive and raises it to the status of an unstructured epistemological realm of its own in which "anyone has a right to his own opinion," a realm which he sets over against Authority's realm where right-wrong still prevails, or (b) the student discovers qualitative contextual relativistic reasoning as a special case of "what They want" within Authority's realm.*

Position 5: Relativism Correlate Competing or Diffuse. *The student perceives all knowledge and values (including authority's) as contextual and relativistic and subordinates dualistic right-wrong functions to the status of a special case, in context.*

Position 6: Commitment Foreseen. *The student apprehends the necessity of orienting himself in a relativistic world through some form of personal Commitment (as distinct from unquestioned or unconsidered commitment to simple belief in certainty).*

Position 7: Initial Commitment. *The student makes an initial Commitment in some area.*

Position 8: Orientation in Implications of Commitment. *The student experiences the implications of Commitment, and explores the subjective and stylistic issues of responsibility.*

Position 9: Developing Commitment(s). *The student experiences the affirmation of identity among multiple responsibilities and realizes Commitment as an ongoing, unfolding activity through which he expresses his life style.*

CONDITIONS OF DELAY, DEFLECTION AND REGRESSION

Retreat: *Active denial of the potential of legitimacy in Otherness; the student entrenches in the dualistic, absolutistic structures of Positions 2 or 1. Variants of retreat involve reaction, negativism, and becoming a dedicated reactionary or dogmatic rebel.*

Temporizing: *A prolonged pause (full year) in any position, exploring its implications or explicitly hesitating to take the next step but not entrenching in the structures of Escape.*

Escape: *Settling for Positions 4, 5 or 6, by denying or rejecting their implications for growth, using the detachment of these positions to deny responsibility for commitment through passive or opportunistic alienation.*

Source: Perry, 1968, pp. 9-10

Positions 1 and 9 are theoretical places; few, if any, of Perry's subjects were scored there. When he began his study in 1953, beginning freshmen tended to score at Positions 3 and 4. Now they enter Harvard College at Positions 5 and 6. About 80% of his sample reached some stage of commitment (Positions 7, 8, 9) by the end of their senior year. Harvard undergraduates are an intellectually talented population within a narrow age-range. Do these stages describe outlooks of other undergraduates, or youth who do not go to college, or adults within a broad age-range? Perry's scheme has been used with success to describe other undergraduates' approach to college, but to my knowledge there is no data on non-college-goers or a wider adult population. For one thing, the interviewing process and scoring system is extraordinarily time-consuming.

Granted that the scheme probably has widespread validity, there are some interesting questions that can be asked regarding interpretation. Is the commitment developed in Position 9 by a 21-year-old the same kind of commitment developed by an adult at 31 or at 51? Does one recycle back through at least some of these positions in renegotiating the commitments of successive life phases? This corresponds with Loevinger's view that periods of integration in adulthood are related to developing commitments, and with Levinson's observations that adults question their commitments in periods

of transition. It is also possible to interpret the scheme as describing phases of adaptation to new learning environments. That is, in a new environment one starts at Postion 1; one's first distinctions are dualistic (good/bad) and trust is a basic criteria. With increasing sophistication, some may be able to start at Position 4 or 5, adopting a "wait and see" attitude because of their knowledge of their own intellectual process. This use of Perry's scheme is similar to my suggestion that Erikson's theory can represent phases of adaptation to new situations.

There is also the matter of recognizing the intellectual and emotional trauma which accompanies changes in one's epistemological worldview. Perry's scheme can be seen as a record of major points of choice between fragmentation and integration, alienation and involvement.

Perry (1968, Chapter 6) sees the most important educational implications of his scheme first as highlighting the courage needed for the transition to commitment in relativism, and the importance to the student of being a confirmed member of a community that is supportive through the aloneness of that transition. Providing this kind of community and individual support is no easy task.

With regard to instruction, Perry sees his sequence as helping teachers understand the diverse nature of "homogeneous" student populations, and to see why different students

perceive them and their courses so differently.

> Our students must be considered a relatively homogeneous group in intelligence and academic ability, and yet our study reveals the wide range, in any one college year, of the ways in which they construed the nature of knowledge, the origin of values, the intentions of instructors, and their own responsibilities. The implications for the conduct of education are appalling, but there they are.
> (Perry, 1968, p. 215)

The scheme can also help diagnose teaching difficulties. In Perry's study the transition point most difficult for students seems to be the transition from Position 4 (legitimate uncertainty is extensive; "anyone has a right to his own opinion") to Position 5 (all knowledge is contextual and relativistic, including authority's). This shift involves discarding the view that knowledge is a quantitative accretion of discrete rightness, including the kind of discrete rightness in which everyone has a right to his own opinion, and adopting a conception of knowledge as the qualitative assessment of contextual observations and relationships. These two positions imply different relationships between teacher and student and place different responsibilities on each role. Teachers whose intention is to facilitate discussion but whose behavior in a discussion consists of "correcting" students about facts, get trapped by powerful forces in themselves and the students. In what Perry calls the "pedagogy of relativism," correction needs to be contingent

on the dynamics of search, analysis, and integration in the student. This calls for considerable skill on the part of a pedagogue, and a conceptual map of the students' experience, which is what his scheme provides.

This scheme was derived from the reported experience of undergraduates in a liberal arts college; as such it is certainly germane to the teaching of liberal arts subjects. One of Perry's initial researchers involved documenting the percentage of final exam questions that required relativism, or the use of multiple frames of reference, in basic subjects for Harvard College freshmen from the year 1900 to 1960. The average "relativism quotient" went from about 8% to 35% with general education courses ending at 75 - 80%. Certainly one's teaching should prepare students to take one's exams. Do students "naturally" move to the more advanced positions, paralleling the epistemological advancement of knowledge in the basic disciplines or do faculty have a responsibility to promote such shifts more directly?

A few researchers have applied this scheme directly to instructional methods in traditional academic subjects such as history and literature. In one application, Knefelkamp and Wydeck, in an undergraduate English course at the University of Minnesota, divided students into two groups: those near Position 3 were given highly structured assigments to explore contradictory and antithetical statements, whereas

those near Position 5 were asked to contrast their own position with that of characters in the readings -- for example, Zorba in Zorba The Greek. In the first group there was movement along the positions; in the second group there was no change. They hypothesized that the students in Position 5 had just recently arrived at relativism and needed more time before developing commitments (Knefelkamp, 1974; Wydeck, 1975).

Diversity of students' epistemological positions also bears on administrative practices in such areas as grouping, selection, and guidance. In grouping it confirms the desirability of heterogeneity so students can learn from each other, recognizing the need to identify and support students at the earlier positions who are most vulnerable to epistemological shock. For some situations, as in the previous example, homogenity of outlook may be useful. In selection and guidance (e.g., curriculum tracking, college admissions), Perry says that knowledge of the scheme sharpens unresolved problems of prediction. For example, students who have done well in a "traditional" school may reflect the outlook of Positions 1, 2, 3, or 4. To predict how well they will do in a college that encourages relativism requires knowledge of whether their preference for dualism reflects a "closed" or "defensive" personality system, or merely lack of the kind of experiences which would foster relativism. It is also important to know whether success at "traditional" tasks includes aptitude for the different intellectual opera-

tions of relativism.

This discussion assumes a different cast when the subject is college admissions, grouping and tracking for adults. Many adults and many colleges have "traditional" outlooks; relativism is not a universally shared cultural value. Colleges do not play the same role in adults' lives as they do in the lives of 18-22-year-olds, nor do colleges have the same incentives for selective admissions, except perhaps in graduate or professional programs. But adults need to know whether they will do well if they enroll and whether a college's orientation meets their needs, and colleges need to make informed decisions concerning program admissions and instruction. Perry's scheme has promising applications in this regard.

LOEVINGER'S CONSTRUCT OF EGO DEVELOPMENT

The term "ego development" as Loevinger and her associates use it, began with Adler's concept of "style of life," which at various times he equated with self, or ego, unity of personality, methods of facing problems, and one's whole attitude toward life. Sullivan (1953) called this the self-system, and advanced a theory of selective inattention which explains why one's ego stage is stable, or changes only slowly. That is, a person tends to recognize only what is in accord with his already existing self-system.

Discordant observations cause anxiety and give rise to the ego's major task: searching for coherent meanings in experience. Thus, an ego stage is a self-reinforcing frame of reference for experiencing (Loevinger and Wessler, 1970, p. 7).

Loevinger sees ego development as a "master trait;" knowledge of it deepens one's access to personality. The trait is made up of broadly correlated patterns of impulse control or character development, cognitive style, interpersonal style and conscious preoccupations, including self-concept. Figure 9 illustrates these sequences with brief descriptive terms, some of which are unfortunately more pejorative at the lower stages than her respect for persons or use of the concept would indicate. These patterns draw upon common elements in other's work (Loevinger sees herself as synthesizing strands of theory, more than developing original theory), including Sullivan, Grant and Grant's (1957) sequences of interpersonal integrations, and Isaac's (1956) sequences of interpersonal relatability, Kohlberg's stages of moral development and Peck and Havighurst's (1960) sequence of character development. The construct also includes parallels with developmental sequences found in Gendlin's (1962) levels of experiencing, Roger's process conception of psychotherapy (1969), Erickson's (1968) stages of identity development, and Maslow's hierarchy of needs and conceptualization of self-actualizing persons (1968). Harvey, Hunt and Schroeder's

(1961) work on personality organization and conceptual development is related, although their conceptualization is difficult to fit into the ego development framework. Thus, to say the least, Loevinger and her associates' work synthesizes psychoanalytic, humanistic and other strands of psychology with a cognitive developmental approach to structural stages. Because their conception is the most comprehensive of the stage theories, it forms the broadest base for exploring the relationship of developmental stage to education.

Loevinger's theory, more than the others, unites cognitive and affective functioning. It is clear from Figure 9 that cognitive development is only part of the ego stage construct. In this regard, her resolution of a continuing dispute among psychologists sheds light on the futility of the same dispute among educators. Here she is explaining the function of the ego in creating and maintaining the self-system:

> A current theoretical dispute among some psychologists interested in ego development and related subjects concerns the relative importance of cognitive and affective factors in that development. This issue appears to be a relic of outworn categories of thought, for integration of observations into a coherent frame of reference is, obviously, cognitive, while anxiety is, obviously, affective. But the failure to attain a meaningful and coherent integration is precisely what generates anxiety. Thus the search for coherent meanings in experience is the essence of the ego or of ego functioning.
> (Loevinger and Wessler, 1970, p.8)

I take this as implying that educators must expect that the

Figure 9
Milestones of Ego Development

Stage	Impulse Control, Character Development	Interpersonal Style	Conscious Preoccupations	Cognitive Style
Presocial		Autistic	Self vs. Non-self	
Symbiotic (I-1)		Symbiotic		
Impulsive (I-2)	Impulsive, fear of retaliation	Receiving, dependent, exploitive	Bodily feelings, especially sexual & aggressive	Stereotypy, conceptual confusion
Self-protective (Delta)	Fear of being caught, externalizing blame, opportunistic	Wary, manipulative, exploitive	Self-protection, wishes, things, advantage, control	
Conformist (I-3) (Self-aware I-3/4)	Conformity to external rules, shame, guilt for breaking rules	Belonging, helping, superficial niceness	Appearance, social acceptability, banal feelings, behavior	Conceptual simplicity, stereotypes, cliches
Conscientious (I-4) (Individualistic I-4/5)	Self-evaluated standards, self-criticism, guilt for consequences	Intensive, responsible, mutual, concern for communications	Differentiated feelings, motives for behavior, self respect, achievements, traits, expression	Conceptual complexity, idea of patterning
Autonomous (I-5)	Add: Coping with conflicting inner needs, toleration	Add: Respect for autonomy	Vividly conveyed feelings integration of physiological and psychological, psychological causation of behavior, development, role conception, self-fulfillment, self in social context	Increased conceptual complexity, complex patterns toleration for ambiguity, broad scope, objectivity
Integrated (I-6)	Add: Reconciling inner conflicts, renunciation of unattainable	Add: Cherishing of individuality	Add: Identity	

Note--"Add" means in addition to the description applying to the previous level. "I" designations are from Sullivan, Grant, and Grant, 1957. The Self-aware (I-3/4) and Individualistic (I-4/5) stages are transitional stages.
Source, Loevinger and Wessler, 1970, pp. 10-11.

process of education (or its result - learning), particularly when it causes students to move through a sequence of entirely new approaches to knowledge such as Perry's scheme represents, is inevitably accompanied by anxiety and by change in the self-system. This is true for children and young adults; it is probably true for older adults as well. As we cannot separate emotion and intellect, we also may not be able to separate intellectual and personal development.

Although I have said that Loevinger's theory is the most comprehensive, particularly in its inclusion of affective determinants of behavior, it is also the most inaccessible for laymen. Loevinger is a psychometrician, so much of the construct's synthesis is implicit. She warns in the scoring manual that you cannot begin to understand the stages of ego development without mastering the scoring system; the tacit component of scoring and knowledge of the concept are identical. The scoring system consists of a 36-item projective sentence completion test, each stem of which has its own individual scoring system; mastering it requires more than a casual interest in its relevance for one's teaching or curriculum design. The sentence completion test is also not likely to be used as a routine diagnostic instrument with students; it is too cumbersome to score on a mass basis and there are tremendous ethical issues involved with collecting and then withholding or distributing students' scores. The

inclusiveness of the measure and its powerful reflection of personality cautions against its use with individuals except in extraordinarily carefully created circumstances.

However, there are ways in which an understanding of ego stages can inform educator's judgments. Because ego stages constitute qualitatively different frames of reference for coping with life and of making sense of the world, they almost as a corollary represent distinct views of the meaning and value of education. Figure 10 illustrates these differences by reproducing responses of individuals at different ego levels to the one item on Loevinger's sentence completion test for ego development that deals explicitly with education. Research (Loevinger, Wessler and Redmore, 1970, pp. 97-98) shows that at the lower stages education is viewed as a thing that one gets and then has; it is what happens at school. At the higher levels education is something that changes one inwardly, and it is seen as a continuing process throughout life. At all levels education is valued, but the source of value changes with ego level. At the lowest level it is seen as useful to get a job (*is what we need for getting a job*); at the conformist level (I-3)[1] it is seen as one important factor in getting a job and as affecting the desirability of work obtained (*is so important*

[1] I-3 can be read as Stage 3. The "I" designators were adopted from the work of Sullivan, Grant and Grant, 1957.

Figure 10

Views of Education by Ego Stage

Ego Level	Characteristic Responses to Education Sentence Completion Stem[1]
Impulsive (I-2) and Self-Protective (Delta) Education is viewed as a thing that you get in school and then you have. Positive remarks are undifferentiated; there are also expressions of distaste for education, or of not getting along in school.	Education: -- is fun and hard -- is a very good thing — is ok -- is very nice to have if you ain't got it you can't get a job — and me don't get along too good -- is useless and a lot of bother -- I think Education is good for finding a job -- is a drag but important — is good, although I hate it, because where would the world be without it?
Conformist (I-3) An uncritical, idealized view of education in which the current ideal number of years of schooling is considered necessary for everyone. Education is generally interpreted as school attendance, which has practical usefulness; one can get a better job with it than without it.	— is of the utmost importance — is a must — is a very important and useful thing today — is a necessity for all U.S. citizens — is very important for children — I think everyone should graduate high school — is an essential requirement in acquiring a good job — helps everyone — is a blessing — is the greatest thing on earth — I had ten and one half years of schooling and someday I will get that last year. Because it's important.
Self-Aware (I-3/4) Transition Education's importance is viewed in terms of life or in the future. There is a shift away from thinking of education as a concrete entity toward thinking of it as a goal and an asset.	— is a very important step in life — is a preparation for life — is very important and invaluable to one's future — should be a prized possession — is very desirable a a goal for all members of my family
Conscientious (I-4) Education is an experience that affects a person's inner life. It is no longer merely a number of years of useful schooling. Its importance lies in stimulation and in potential enrichment for the individual. It influences a person's whole life, making it more worthwhile and enjoyable. Education is a privilege or opportunity that should be available to everyone. It has significance in improving society; the educational system may be seen as needing improvement as well.	— is the standard for a strong America — seldom lives up to its goals — will get quite poor if the type and quality of teachers does not improve — is not just what they teach at school — is very important,and worth working for — be a privilege and not a rights — should be provided with equal opportunity for all — is a challenge but also a necessity — is a constant process not limited to a classroom — is a source of satisfaction in the present and for the future — is essential in gaining maturity — helps one acquire insight into problems — is the most important thing along with being able to love — is the foundation for a socially and financially secure life
Conscientious/Autonomous Transition (I-4/5) This view has an element of both the conscientious and autonomous perspective; conscientious themes are more fully elaborated and the focus is shifting to education as a life long process essential for a full life.	— is a lifelong process — You can never have enough of it. Life should be a process of learning as much as you can about anything at all. — helps a person become himself -- opens new avenues of thought and produces more joy in living — is a must because the more I learn, the more I enjoy life — is necessary now but the general trend of education should be training for life not a profession — is necessary. What we learn is not as important as the fact that we are learning to think for ourselves.
Autonomous (I-5) Education is seen as leading to a deeper understanding of oneself and others, as helping to cope with life, as leading to creativity, self-fulfillment and deeper values; hence, education is intrinsically valuable. It is not a thing one has or gets, once and for all, nor is it identified solely with school and intellectual achievement apart from interpersonal relations and emotional involvements.	— seems valuable in itself — will help me through life. I am not being educated because I have to, but education is a wonderful thing. — can be a means or an end depending on other characteristics of those who pursue it — is learning to solve problems in a better way—to know what needs doing and when and how to do it — means a lot to me, I'll stagnate if I never do anything creative — is a necessary part of my development as a unique individual — is necessary for self-understanding and is experienced formally and informally — is the development of the entire man, mental, physical and spiritual -- is necessary to enjoy life to its fullest and to get the most from oneself — is rewarding only if you learn to see things in a variety of ways and can have feelings for other people's beliefs — is both a stimulation to growth and method for accumulating knowledge for future use
Integrated (I-6) A more fully elaborated version of autonomous perspectives.	— is a many splendored thing, It is also a necessity, a responsibility and at times a trouble, a sadness.

1. These are characteristic responses to the sentance stem "Education" —which appears on the standard form of Loevinger's sentance completion test for ego development. Additional responses and further explanation of scoring

when looking for employment). At the self-aware (I-3/4) level it is important for advancement (*is the key to success*); at the conscientious level (I-4) it is also important for personal growth (*is a crucial part of development*); at the autonomous and integrated levels (I-5, I-6) education is seen as a help in coping with life's problems, in finding self-fulfillment, and in understanding oneself and others. It has intrinsic value (*is necessary to enjoy life to its fullest and to get the most from oneself*).

Even a quick glance at Figure 10 reveals qualitative differences among stage-related perspectives, and also some of the differences among ego stages in world-view, cognitive complexity, and salient concerns. Looking back at Figure 9 helps round out the comparison. Somewhere on this chart are the perspectives of all the actors -- students, teachers, parents, administrators, program directors, voters, legislatures, school committees, professional associations and commissioners of education. What happens when these perspectives clash within a classroom, office, institution or policy-making body? These perspectives are not the result of isolated accidents, so that strong differences of opinion or approach can be easily accommodated. They are integral parts of one's basic frame of reference, which is maintained by self-reinforcing perceptions. Miscommunication is not only highly likely, it is probably patterned in stage-related

ways. Americans, for example, are known for their tremendous faith in education. Yet what they have faith in and how they experience its value is strikingly different across ego levels. To repeat Loevinger's opinion, the modal stage for adult Americans is the self-aware stage (I-3/4), a transitional stage between conformist and conscientious perspectives. This is the perspective, then, of a large number of educators and adult students. Most prominent professional educators probably reflect a conscientious perspective. The ideal of life-long learning taps a view of the development of human potential that only begins to be mentioned at I-4/5, the transition from a conscientious to an autonomous orientation. In other words, goals such as "lifelong learning" or "enhancing the quality of life," or even "quality education," are acceptable to large numbers of people at the espoused level, but in practice they are reinterpreted to match one's own mentality of perception and action.

One crucial question of interpretation is whether the differences illustrated in the responses in Figure 10 represent semantic quibbling, or the careful explication of a coherent worldview that is related to behavior. Although direct evidence is sparce, there is data from a large-scale organizational program in Curacao where people who score differently on the sentence completion test also react differently to the same training experiences, in ways that are patterned according to the dynamics of transition from one

ego stage to the next (Lasker, et al., 1974). Look closely, for example, at the difference in the two sets of statements in Figure 11 concerned with wanting, needing, and getting more education.

The first set of statements is scored between the self-protective and conformist levels (Delta/3) as a compromise between the self-protective (Delta) view of education as an external object and the conformist's (I-3) uncritical view that it is immensely important. In this first set of responses, there is a quality of wish fulfillment divorced from responsibility. The second group of statements is scored at the conscientious (I-4) level because, in addition to expressing the desire for more education, they imply a sense of personal choice and responsibility, either for creating the opportunity for further education or regret for not having taken advantage of past opportunities. Still higher level responses indicate that the person is aware of the need to assume more personal responsibility for his or her learning (e.g., *is a most vital part of our lives; it's a pity we often don't realize it until it is too late,* I-4/5). These differences, and those in Figure 10, reflect underlying assumptions which account for radically different responses to educational settings.

Like Perry, Loevinger considers knowledge of ego stage as equivalent to knowledge of "a way in," a way of understanding where students are and of making conscious choices of instructional methods and approaches. For example,

FIGURE 11

Statements About Wanting and Getting More Education
at Conformist and Conscientious Ego Levels

Self-Protective/Conformist
(Delta/3)

Something I never got, but I wish I had an education.
Is what I want most at this Time.
I want to go to high school.
Is very important because I want to finish it.

Conscientious (I-4)

Wish I had taken advantage of getting a better education.
I wish I would have taken subjects I could use in raising my family and used my time better in school.
Is something I think people should do more about instead of just think. I should have finished high school anyway.

---

adult students at the conformist stage in ego development (I-3) usually expect the teacher to be an authority; they want structure and are uncomfortable with loose or self-defined expectations; they are unable to design their own learning activities unless given help. Correspondingly, conformist teachers and administrators are often rule-bound; they are comfortable in the role of an authority and feel they should assume it. They give directions, set parameters, and generally tell others what to do. They are not very good facilitators of others' learning, when being a facilitator means being a co-equal partner who helps someone set goals, find resources, and evaluate results. Conversely, adult students at the autonomous stage (I-5) are predominantly concerned with personal uses of knowledge. They tend to value learning and ideas for their own sake, apart from their usefulness in social and occupational roles. They want to generate their own ideas and tend to resent lectures, reading assignments and opinions that are imposed by external authority per se, without personal mediation. Autonomous teachers and administrators will often allow others freedom to the point of frustration; they will be authoritative without assuming the role of authorities, and usually see their role as facilitators, as providing experiences and arranging situations so that others can exercise initiative and find personal meanings. These two orientations create very different class-

room norms, group dynamics, and interpersonal relationships between teacher and students, and among students, and generally employ different instructional methods. Knowledge of the personality dynamics underlying these different orientations, together with their predictable strengths and weaknesses, can have great practical value, provided this knowledge is genuine and not superficial.

LASKER'S VIEW OF THE IMPLICATIONS OF EGO STAGE FOR ADULT EDUCATION

Harry M. Lasker has applied Loevinger's construct to adult education, speculating about the kinds of motives persons at different ego levels appear to bring to educational experiences and identifying stage-related approaches to knowledge, learning and teaching. His conceptions have grown out of a five-year organization development effort in Curacao, and also teaching adult students at the Harvard Graduate School of Education. Figure 12 summarizes his and Cynthia de Windt's conceptualization of stage-related differences in definitions of knowledge, the uses and origin of knowledge, motives for education, conceptions of learning process, teacher and student roles, and the function of an educational institution. The diagram shows a progression of views of knowledge from use as a means to concrete

in valued social roles, to know-how and competence in work and social roles, to self-knowledge. The teacher's role changes from demonstrating and enforcing, to revealing truth as an authority, to being a role model and evaluator of students' competencies, to being a facilitator for students' emerging levels of insight. The institution's function shifts from showing how things should be done, to providing basic information and certifying the level of internalization, to providing opportunities for skill development and certification, to fostering personally generated insight by posing questions, highlighting dilemmas, and providing new experiences. These distinctions are provocative in outlining in broad brush strokes some of the major differences among people and programs in adult education. They are preliminary in that they are supported by an intuitive and clinical understanding of how ego stage dynamics operate in educational settings, rather than by "hard" empirical evidence across large numbers of subjects.

Because organizations and educational institutions are composed of individuals who bring their developmental stage to work with them, Lasker sees these orientations as describing the internal logic or system dynamics of institutions or particular educational programs, as well as the perspectives of students and teachers within them. For example, the instrumental orientation of the self-protective

Figure 12

Implications of Ego Stage for Adult Education

Ego Development	What is Knowledge	What Use is Knowledge	Where Does Knowledge Come From?	Motive for Education
Self-Protective	A possession which helps one to get desired ends; ritualistic actions which yield solutions.	Means to concrete ends; used to obtain instrumental effects in world education to get X	From external authority; from asking how to get things	Instrumental; to satisfy immediate needs
Conformist	General information required for social roles; objective truth, revealed by Authority	Social approval, appearance, status used to meet expectations and standards of significant others education to be X	From external authority; from asking how things work	To impress significant others; to gain social acceptance and entry into social roles
Conscientious	Know-how: Personal skills in problem solving; divergent views resolved by rational processes	Competence in work and social roles; used to achieve internalized standards of excellence and to act on or change world education to do X	Personal integration of information based on rational inquiry; from setting goals, exploring causal relationships and asking why things work	To achieve competence relative to standards of excellence
Autonomous	Personally generated insight about self and nature of life; subjective & dialectical; contradiction & paradox as central.	Self-knowledge; self development; used to transform self and the world education to become X	Personal experience and reflection; personally generated paradigms, insights, judgments; from asking if things are as they appear	To deepen understanding of self, world, and life cycle; develop increasing capacity to manage one's destiny

(Figure 12 continued)

Institutional Function	Learning Process	Teacher Role	Student Role
To enforce learning by providing examples, showing how things should be done	Demonstration: showing how to	Enforcer: Teacher as agent who focuses attention and shows how focus: showing	Student acts as imitator of activity
Provide pre-packaged general experience or basic information; to certify level of information internalization	Revelation: of truth by expert authority; if conflict between ideas is perceived, one element is dismissed as incorrect	Instructor: Teacher as presenter of information (often in impersonal group mode, e.g. lecture) focus: verbal presentation	Student as subordinate in frequently impersonal relation with teacher, student internalizes and parrots information
To provide structured programs which offer concrete skills and information, opportunities for rational analysis, and practice, which can be evaluated and certified	Discovery of correct answer through scientific method and logical analysis; multiple views acknowledged but congruence and simplicity sought	Role Model & Evaluator: Teacher models skills, poses questions, outlines forms of discourse, evaluates analytic abilities and skill competencies focus: apprenticeship, internship	Student as subordinate in substantial personal interaction with teacher; student analyzes & critiques information, practices competence
To provide new experiences, to ask key questions; to pose key dilemmas; to foster prsonal experience and personally generated insight; to highlight significant discontinuities and paradoxes	Emerging levels of insight: learning entails reorganizing past insight into new personally generated paradigms thru new experiences. Learning follows dialectical process in which contradiction & multiplicity of views is itself of interest	Facilitator: Teacher sets up experience & reflective observation by students, is a resource for planning and evaluation. focus: facilitating	Student defines purposes in collegial relationship with teacher as equal participant; emphasis is on personal experience, creating own interpretations, meanings, transforming meanings

SOURCE: H. Lasker & C. de Windt.

100

101

89

stage reflects in a global way the philosophy behind many "compensatory education" or manpower training programs; the other-directed orientation of the conformist stage describes many programs of general education in both high schools and colleges; the competence-seeking orientation of the conscientious stage outlines the salient assumptions of most professional education and high level vocational training, including science and academic work; and the search for personal relevance of the autonomous orientation identifies much avocational learning, and learning related to personal growth. Here the principle of hierarchical integration becomes critical; higher stage individuals feel impatient in learning environments oriented to lower stages, while lower stage individuals can use a facilitated mode but not to full advantage.

Interpreting people's motives and concerns in seeking education is a perennial practitioner's problem. Figure 13 elaborates the "motives column" of Figure 12, differentiating motives which Lasker believes adults bring to education by virtue of their ego stage orientations. I have already mentioned some of these motivations in connection with life phase; the addition of the concept of ego stage adds further perspective for understanding how work-related learning and personal learning fit differentially into the pattern of individual lives.

Figure 13

Ego Stage-Related Motives for Education in Adulthood

Stage	Work/Career	Personal Life
Autonomous		
I-5	Second career: (radical break with past) effort to restructure career on basis of real interests and personal competencies -- to become what one can through work. (to follow one's interests; to explore one's possibilities)	Intellectual curiosity: (interpretive) to gain a better insight into the meaning of human society or self.
Conscientious		
I-4	New career branch: development of new professional competencies by virtue of new branch in career. Skill elaboration: deeper training in an applied skill to increase one's technical proficiency. Information updating: desire to remain current with technical knowledge in field of expertise (for a heightened sense of personal competence; out of a sense of role obligation, guilt)	Self-knowledge: to get general insight into self, and why one does things. Intellectual curiosity: (extensive) to extend existing body of knowledge, use old knowledge. New skills (hobbies): the acquisition of new abilities where the chief concern is for the personal satisfaction in personal competence.
Conformist		
I-3	Credentials: desire to acquire more credentials (to assure technical requirements met for personal advance) (keeping up with colleagues; boosting sense of adequacy through acquisition of credential)	General knowledge: general knowledge acquired to give a better understanding of how something works (understanding how things work; counteracting boredom; impressing others)

Source: Lasker, 1975.

One final aspect of Lasker's work brings up the key issue of stage change. It is possible to design educational programs to create stage change in ego development. Lasker and Victor Pinedo direct Fundashon Humanas, a training agency in Curacao in the Netherlands Antilles which is engaged in an ongoing five-year organizational development effort working with over 2000 employees of the island's major corporation. Initial training groups are stage-homogeneous and aimed at personal development; follow-up sessions deal with team building. Structured experiential exercises are based on the microdynamics of moving from one ego stage to the next. Pre- and post-measures, from within 6 months to a year after training, seem to show movement of about a half stage. The rate of change varies by the participants' initial stage: the transition from self-protective (Delta/3) to conformist (I-3) seems to be easier to facilitate than the transition from self-aware (I-3/4) to conscientious (I-4), these being the two most common stages within the corporation. Initial data also indicate that it is possible to change the interpersonal dynamics and problem solving of a work team (Lasker, et al., 1974, 1975). This data is preliminary, but also corroborated by clinical observation, participants' self-reported changes, and observations of personnel managers and other corporation officials. Thus, knowledge of ego stage not only can provide a "way in," but also a map of "the way

up," which can be used to facilitate personal and organizational change. This possibility, as in Kohlberg's and Perry's work, brings with it a host of ethical dilemmas.

IMPLICATIONS OF DEVELOPMENTAL STATE FOR EDUCATION

As the preceding pages have shown, developmental stage theories provide a way to understand the qualitatively different frames of reference which adults, including educators, bring to educational settings. They clarify differences in motivation, cognitive style, conceptions of knowledge, conceptions of the locus of responsibility and role relationships involved in teaching and learning, and differences in affective style and ways of coping with institutions and persons. They also provide a map for growth, and some preliminary ideas about the nature, direction and scope of learning involved in adopting qualitatively different frames of reference for experience.

Lasker argues that given an understanding of stage concepts, educators can choose a "static" or "dynamic" stance with respect to stage change. In a static program, knowledge of the interconnected progressions of developmental stage can be useful in instructional design and in the creation of challenging and effective learning environments. There need be no intention to promote stage change, at least as a major objective. Programs with a "dynamic" orientation,

obviously smaller in number, are consciously designed to promote development to the next higher stage along an identified sequence. This distinction quickly raises the crucial dilemmas inherent in conceiving of education embedded within a developmental stage framework. Most adult education is, and undoubtedly should be, static with respect to the conscious promotion of stage change. (Or are educators and social service agencies merely using other language and actually desiring stage change without realizing it?) However, is not a "static" educational program a contradiction in terms? Hearing these distinctions, most of us might want to have "dynamic" programs, yet doing so involves complex issues of ethics, competence and appropriateness. If promoting developmental stage change becomes an educational fad, the results could be both ludicrous and disastrous.

Here it is informative to examine several theorists' views on the matter. There is no clear concensus. Perry sees an undergraduate liberal arts education as producing changes in intellectual and ethical frames of reference. He counsels us to create a community to support students through the disequilibrium and alienation of these epistemological shifts, and suggests examining instructional methods and administrative practices to find ways to amplify this support. Kohlberg unequivocably advocates the promotion of moral development through moral discussions and the creation

of just communities. However, his work with adults has, so far, been confined to college undergraduates and prison inmates. Loevinger appears uninterested in educational applications of the construct of ego development, except as ego stage illuminates the personality orientation of students. Lasker and Finedo of Fundashon Humanas are using knowledge of the dynamics of ego development to structure personal growth experiences and team building exercises in which one clear criteria of success is change in participants' ego stages.

Thus, stage theories raise inevitable and crucial questions concerning the purpose and objectives of education. Their resolution is more complex than deciding yes or no concerning the promotion of stage change. Although most educational rhetoric identifies personal development as an objective or consequence of education, not everyone would agree that the objective is to promote the developmental progressions elaborated by the particular stage theorists. Conversely, people might agree but interpret the same ideals in very different terms. This explains many of the arguments about educational objectives and ways of implementing them (e.g., why credit for life experiences and concern for academic standards are crucial issues in external or individualized degree programs as hidden assumptions concerning roles and responsibilities, and the source of knowledge and authority are brought to light).

The question of purposes is made still more complex by the fact that for children and young adults change in developmental stage is an unintended or un-understood consequence of formal education. For example, there is accumulating evidence that for many undergraduates a college experience mediates both a change in life phase (18-22, "leaving the family") and a change in ego stage from roughly a conformist to a conscientious orientation. Kohlberg (1973) sees college as a time when privileged upper and middle-class youth develop relativism in moral reasoning, partly as the result of a moratorium of commitments and a chance to question adult society before making choices. Perry's (1968) progressions from basic dualism to relativism to commitment within relativism were derived from the experience of Harvard undergraduates. Chickering, in two books, Education and Identity (1969) and Commuting Students Versus Resident Students (1974), has explored the role of the undergraduate liberal arts college in promoting personal development along vectors similar to those elaborated in various developmental progressions.

However, it is doubtful that increased relativism is exemplary of the kind of changes that many parents have in mind when they send their children off to college to "get ahead" or so that they will "have greater opportunities than we did." Prospective students of any age wanting to "get an education" probably have little idea of its potential internal

consequences. Stage changes make it difficult to "go home again," at least psychically speaking. This is poignantly true for members of minority groups for whom there is the strain of double perspectives and loyalties. Native American professionals, for example, find it difficult to return to a reservation community after "completing" their education. Although these double loyalties reflect culture as well as developmental stage, if one's stage is a basic frame of reference for experiencing, then changes in that frame of reference have a profound impact on individual's lives.

If there are unintended effects for undergraduates in one life phase, what are the effects on the increasing number of adults in other life phases who are returning to school, or newly enrolling in college programs? Do adults beginning a liberal arts education at 40 go through Perry's progressions? Where are they likely to begin? Do adults without college experience also make these epistemological shifts, just as a result of living longer and learning from experience? What happens internally to adults who are acquiring a GED, or who, after years of working, decide to study guitar or photography? Do educational opportunities, both formal and informal, provide opportunities to explore disequilibrium and make new personality integrations? We have little information about the scope, quality or magnitude of the changes in adults' lives which might be traced to, or influenced by, education.

The mechanisms of nontraditional study in higher education (e.g., external degrees, credit for life assessment, individualized courses of study) would seem to provide unique opportunities for adults to integrate past life experience and present work experience with both academic study and personal growth. Mentors at Empire State College, a nontraditional alternative college of the State University of New York, report that many adult students undergo remarkable personal changes in the course of seeking a degree; some of these seem to follow the pattern of life phase transitions, others seem clearly related to ego stage. It is reasonable to assume that new personality integrations accompany an adult's investment in learning and that some of these changes are changes in developmental stage, but we have very little empirical evidence to support this claim.

It still remains for us to define the purposes of education for adults. Kohlberg and Mayer (1972) identify three strategies for formulating educational objectives: the "bag of virtues" or "desirable trait" strategy, which attempts to create psychically healthy people and is linked to what they see as a romantic educational ideology; the "industrial psychology" or "prediction of success" school, which aims at developing skills and abilities that bring status in the social system and is linked to an educational ideology of cultural transmission; and a "developmental philosophic" strategy, which is linked to Dewey's progressive ideology

and the empirical sequences of development identified in this chapter. I see these three stances as being broadly stage-related; the "bag of virtues" corresponding to a conformist orientation, the "success" school to a conscientious orientation, and the "developmental" view to an autonomous orientation, which again brings us back to developmental stage as a pervasive frame of reference for setting goals and guiding behavior. Kohlberg and Mayer argue that development should be the aim of education. Who should make such a decision, and by what process -- especially for other adults? Who does make it? What is the appropriate balance between helping others, insisting on individual responsibility, and promoting the collective good?

It is possible that individuals' and society's choices may conflict. Society needs individuals who can cope with a world of uncertainty, rapid change, and global interrelationships, which in terms of developmental stage means people at the higher stages. But this same perspective goes beyond society, taking a critical and relative perspective on society's rules. It is probably difficult for a democratic, egalitarian society to choose to foster a level of development higher than the modal stage of the majority of its people. Plato's Republic attempts to resolve this difficulty, but Plato's resolution has little relevance for a society with individualistic, egalitarian values and a decentralized education and social service system. We are left sorting through

the interconnectedness of individual, institutional and cultural change, mindful that education plays a midwife's role -- present at the birth but in no way in control of the outcome.

Thus, there are many unresolved dilemmas concerning the implications of developmental stage theories for adult education. Here I will restate only a few:

- Are higher stages better? If so, along what dimensions?

- Should education consciously promote movement along the stage sequences identified by various theorists?

- What are the ethical implications of consciously promoting stage change (e.g., under what conditions is it ethical for prison officials and social scientists to try to "develop" inmates out of a self-protected, instrumental exchange orientation into good-boy, good-girl conformity? Is it appropriate for instructors in an adult degree program to design a sequence of assignments leading students to relativism?).

- Is development along stage sequences an unintended consequence or byproduct of formal education for adults?

- How can there be "truth in advertising" or individual responsibility when stage theory predicts that people's understanding of educational goals will be assimilated to their own stage-determined (or, more accurately, stage-related) frame of reference?

- More than life phase theories, stage theories can be used for the value-laden labelling of others. Can this be presented if the ideas gain widespread use?

- Given the probable relationships between developmental stage, social class and level of formal education, is there any guarantee that stage sequences are not merely descriptive labels of the privileged who advocate education over courses of action which would alter basic social and economic injustices which set ceilings on individual development?

- What about people whose cognitive abilities limit their development in other dimensions? If development along identified stage sequences becomes normative, we may fail to recognize other dimensions of individual worth.

These questions are not unique to the application of developmental stage theory to education. The same questions can be asked with respect to the uses and abuses of intelligence testing, or other applications of social science for socially sanctioned ends. As with concepts of life cycle transitions, knowledge of stage progressions aids personal understanding and is a useful backdrop to teaching, counseling, and instructional design. Institutionalized responses on a large scale, however, are fraught with difficulties, including the difficulty that no response is also a response, and carries concomitant responsibility.

CHAPTER IV

THE DOMAIN OF LEARNING STYLE

The dimension of learning style, or cognitive style, constitutes yet a third way of conceptualizing differences in adults as learners. The word style brings to mind ideas of preferences and predilections, and one's own distinctive, habitual, or characteristic ways of doing things. That is its meaning in this context. A learning style is a functional preference for how to learn. The word type is almost synonymous with style. People with different learning styles constitute different types of learners.

Learning styles are usually defined in terms that are either primarily cognitive or behavioral, or primarily atomistic or global. A plethora of research identifies various combinations of cognitive strengths and abilities; Figure 14 for example, describes nine cognitive styles identified by Messick (in Wittrock and Wiley, 1970) from a substantial research literature. Each of these, as Nathan Kogan points out (in Lesser, 1971), has implications for instruction. Some, such as cognitive complexity versus simplicity, are probably embedded in developmental stage sequences as well as reflecting stylistic differences among individuals. Also belonging in this classification is Joseph Hill's work on

FIGURE 14

Nine Cognitive Styles

(1) Field independence vs. field dependence: an analytical, in contrast to a global, way of perceiving (which) entails a tendency to experience items as discrete from their backgrounds and reflects ability to overcome the influence of an embedding context.

(2) Scanning: a dimension of individual differences in the extensiveness and intensity of attention deployment, leading to individual variations in the vividness of experience and the span of awareness.

(3) Breadth of categorizing: consistent preferences for broad inclusiveness, as opposed to narrow exclusiveness, in establishing the acceptable range for specified categories.

(4) Conceptualizing styles: individual differences in the tendency to categorize perceived similarities and differences among stimuli in terms of many differentiated concepts, which is a dimension called conceptual differentiation, as well as consistencies in the utilization of particular conceptualizing approaches as bases for forming concepts (such as the routine use in concept formation of thematic or functional relations among stimuli as opposed to the analysis of descriptive attributes or the inference of class membership).

(5) Cognitive complexity vs. simplicity: individual differences in the tendency to construe the world, and particularly the world of social behavior, in a multidimensional and discriminating way.

(6) Reflectiveness vs. impulsivity: individual consistencies in the speed with which hypotheses are selected and information processed, with impulsive subjects tending to offer the first answer that occurs to them, even though it is frequently incorrect, and reflective subjects tending to ponder various possibilities before deciding.

(7) Leveling vs. sharpening: reliable individual variations in assimilation in memory. Subjects at the leveling extreme tend to blur similar memories and to merge perceived objects or events with similar but not identical events recalled from previous experience. Sharpeners at the other extreme, are less prone to confuse similar objects and, by contrast, may even judge the present to be less similar to the past than is actually the case.

(8) Constricted vs. flexible control: individual differences in susceptibility to distraction and cognitive interference.

(9) Tolerance for incongruous or unrealistic experiences: a dimension of differential willingness to accept perceptions at variance with conventional experience.

Source: Samuel Messick, "The Criterion Problem in the Evaluation of Instruction: Assessing Possible, Not Just Intended, Outcomes," in Wittrock and Wiley (eds), 1970.

cognitive style mapping. These formulations of cognitive style, with the exception of Hill's, are atomistic in their concentration on single traits and abilities and their lack of connection to a holistic theory that purports to encompass the major functional modes of learning.

In contrast, David Kolb and his associates have developed a global measure of learning style based on Kurt Lewin's cycle of experiential learning. This concept of learning style is more behavioral in nature, as is Ian Mitroff's use of Jung's theory of personality types to identify functional styles of problem solving. The contrast between Hill's ideas and Jung's represents the two extremes of this domain.

Style differences are usually considered to be value neutral. That is, there is no basis for saying that one style is better than another in a normative sense, or that any one style represents greater developmental complexity. People simply have different constellations of functional preferences and abilities. Each style has strengths and limits, which are more or less appropriate in particular situations, or for solving particular kinds of problems. One's characteristic cognitive or learning style does not change much over time; when it does, it is usually conceived of as the result of a dialectical process. One broadens and deepens one's natural style to include other styles, particularly those with opposite strengths.

INTERRELATIONSHIPS OF STAGE, PHASE AND STYLE

It is helpful to define the characteristics of the domain of learning style in opposition to the basic characteristics of developmental stage and life phase. In contrast to life phase, learning styles are generally indifferent to time-related, or life course perspectives. In contrast to stage theories, although learning styles represent interrelated patterns of behavior, perception and cognition ("structured wholes"), they are in no way conceived of as part of an invariant or hierarchically integrated sequence. Differences among styles are not as basic to personality and character as the qualitative differences in mental structures ascribed to developmental stages; style differences are a matter of degree, not of kind (for example, how central action is to one's mode of learning as opposed to reflection; we all have some minimal ability to act and to reflect on actions).

Statements about the interrelationships among stage, phase and style can only be speculative at this point. Broadly construed, learning style is probably independent of one's life phase and indirectly related to the worldview of one's developmental stage. Basic learning style preferences probably remain consistent, from childhood to adulthood, although they may be expanded or deepened over time, particularly as a result of change in developmental stage. An

ego stage probably contains embedded within it preferences for certain styles of learning over others. Although this is speculative, there is probably a weak correlation between learning style as Kolb defines it and ego stage as Loevinger defines and measures it. Thus, people with different learning styles might be said to represent subtypes of learners within the broader cognitive and personality organizations of developmental stage. In other words, whereas one's developmental stage dictates broad patterns of motivation and assumptions about knowledge, one's learning style represents specific patterns of preference and predilection within it. A change in stage probably also involves an elaboration of learning style, and new areas of emphasis. A change in life phase signals the changing issues or tastes to which one's coping and learning abilities are addressed.

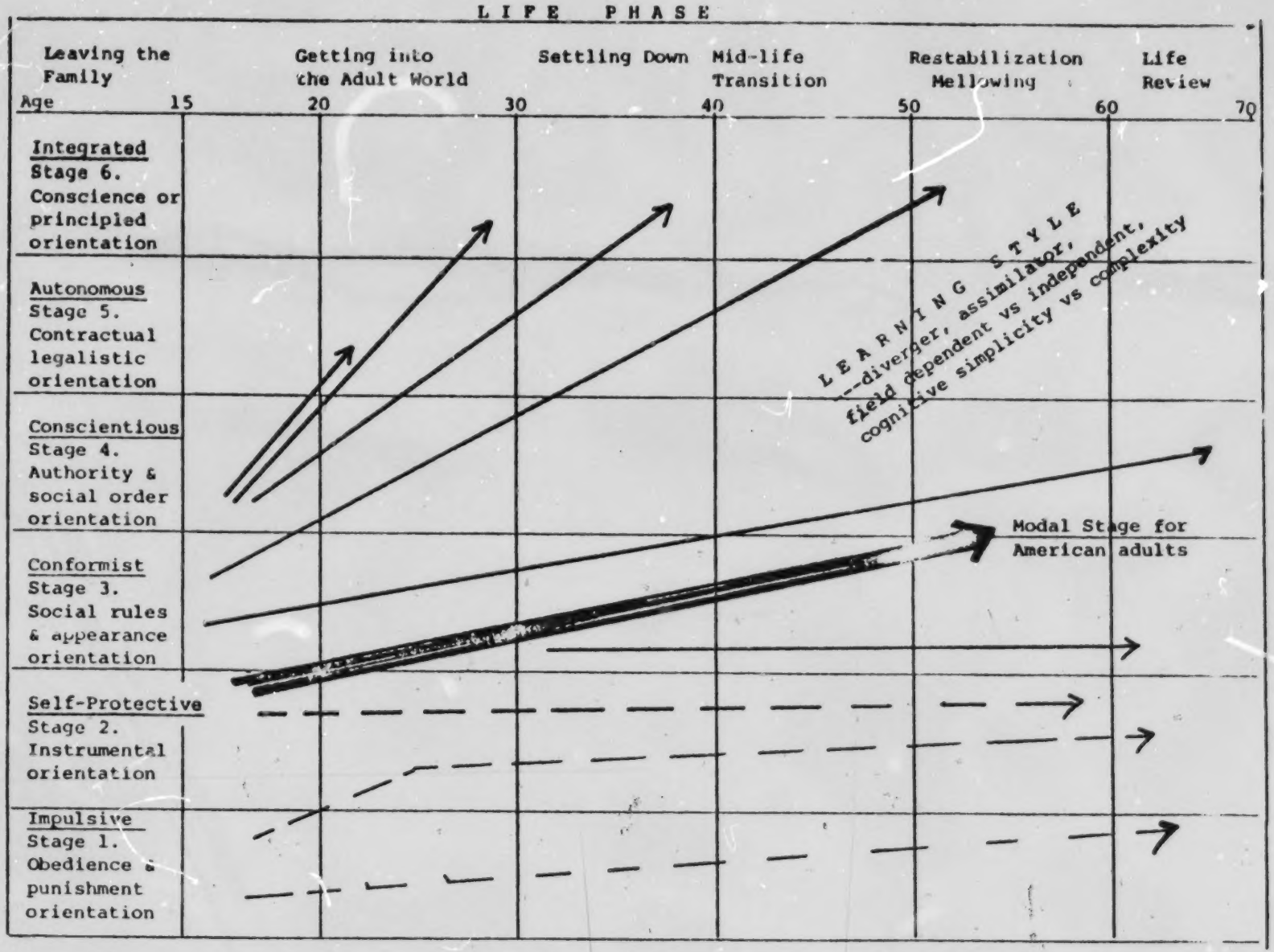
As an analytical domain, learning style taps a dimension of individual differences that is missed or obscured by the other two perspectives. Additionally, the idea of style adds complexity to the conceptual framework as a whole. We can theoretically hold any one of the three domains constant and then trace successive changes in the other two. Adding style as an analytical domain presents the possibility of sorting data and theory in three different ways.

Figure 15, represents a way of conceptualizing the interrelationships of these three dimensions. Time is repre-

sented horizontally across the top of the chart, divided into life phases. Developmental stage forms the vertical dimension. The solid arrows show potential trajectories of growth; the double-line arrow shows the life path of most adults in our society. Broken arrows represent adults functioning below conventional levels, which for most people is probably dysfunctional at least in some ways in our society. Because ego stage is broadly correlated with social class and with educational level, the broken trajectory can be interpreted as an indictment of society's failure to provide all adults with opportunities to fulfill their potential. The growth trajectory shows a fan-shaped potential, which is all too often, in my opinion, flattened into linear reality. Learning style appears on the chart in the third dimensional characteristics of individual arrows; for example, whether a person negotiates stage and phases transitions in a manner which is field independent versus field dependent, or shows the characteristics of a converger versus a diverger, or those of an alogical risk-taker rather than a careful thinker.

Learning style typologies often seem simplistic in comparison with the elaborate formulations and scoring systems of developmental stages. However, they have the virtue of easier classification and measurement, and of a more direct relationship to the world of work and formal education. Different occupational specializations and academic disci-

The Growth Trajectory of Phase, Stage and Style[1]



1. Phase, Stage and Style designations on this chart are merely illustrative. The life phase designations are Levinson's, for the most part; stage names are Loevinger's (underlined) and Kohlberg's. The arrows and relationships shown are hypothetical; we do not have data to be more precise.

plines reflect different learning styles. Because the concept is normatively neutral, the idea is less threatening and more immediately acceptable for application. Style differences are usually closer to behavior, and are directly relevant to career choices and academic satisfaction; the concept, therefore, has more direct usefulness.

I have defined the construct of learning style in a manner that is more epistemologically eclectic than I have for stage and phase. This is to allow inclusion of the multitude of ideas about people's traits as learners that do not share the philosophic and academic tradition of most phase and stage theorists. In a way, style is a catchall category, where if a trait or ability or a global description of one's orientation seems to affect learning we want to investigate more closely. This inclusiveness is apparent in the next section of this paper which reviews briefly the work of Joseph Hill, David Kolb, and Ian Mitroff's use of Jung's theory of personality types.

HILL'S APPROACH TO COGNITIVE STYLE MAPPING

Hill sees cognitive style from the viewpoint of an educational scientist trying to make possible personalized education (Hill and Nunney, 1971 and 1975). He divides cognitive style into four "sciences," each of which reflects

a different aspect of an individual's cognitive process in making meaning from experience: (1) symbol comprehension, which includes fifteen variables involving differential ability to derive meaning from sense perceptions and social situations as well as from language and numbers; (2) cultural determinants of the meaning of symbols, in which family, associates, and self are seen as agents which modify symbolic meaning; (3) modalities of inference, which include differential reliance on assessments of magnitude, difference, relationship, appraisal and deduction; and (4) memory, including its physiological base. Hill has not developed a typology of cognitive styles per se; rather, a cognitive map shows an individual's unique configuration of the traits identified by the scheme.

Cognitive style mapping is based on an extensive battery of computerized tests which yield an individual diagnosis (cognitive map) and, in schools or colleges equipped for it, a prescription for individualized instruction based on students' cognitive strengths. The chief drawback of individualization within this system is that it involves the specification of alternative methods of instruction for predetermined course content (e.g. whether a student learns best through lectures, discussion groups with and without faculty present, peer tutoring, programmed instruction); it is more difficult to interpret the significance of the

information in an individual's cognitive map to a learning situation where goals are personally selected and include personal development.

Hill's approach fits within the domain of learning style proposed here because he sees the components of cognitive style as value neutral functional strengths and preferences. Compared to other theorists, this approach is much more specific with regard to the intricacies of cognitive functioning, but unidimensional in that it deals with cognitive traits (not, for example, with behavioral or affective coping styles of "getting to" and "getting through" an institution of learning). The scheme does not place cognitive traits and abilities in a larger developmental framework of character or personality organization, (the analytical function of developmental stage), nor does it show the function of education with respect to important tasks and concerns throughout the life course (the analytic function of life phase). Compared to Kolb and Jung, the other style theorists, I have placed in this domain, Hill's concept is complexly elaborated within dimensions whose application seems limited to formal educational settings.

However, this limitation brings practical utility. Hill's research tends to show that matching the cognitive styles of junior college students with forms of instruction helps students master course content, particularly students

who are unlikely to succeed with traditional forms of instruction. Other research has identified collective cognitive styles for educational administrators (Zussman, 1968), "successful" teachers (Dahnke, 1966), and for students with positive and negative attitudes toward school (Blanzy, 1970). Similarity of cognitive style is also related to favorable evaluation of teachers by administrators (DeLoach, 1969), of teachers by students (Blanzy, 1970; Schroeder, 1969), and of students by teachers (Wasser, 1969; Schoeder, 1969; and Fragale, 1969). Individuals' cognitive style apparently influences their styles of counseling, teaching, and administration; for example, the degree of match between supervisor and subordinates in an administrative unit has been found to act as a variable in predicting conflict in mutual role expectations (Eisenman, 1973). These studies were carried out mainly in elementary and secondary schools, but the results should be applicable in other settings. Hill's measure apparently taps important dimensions of individual's styles of functioning in educational institutions.

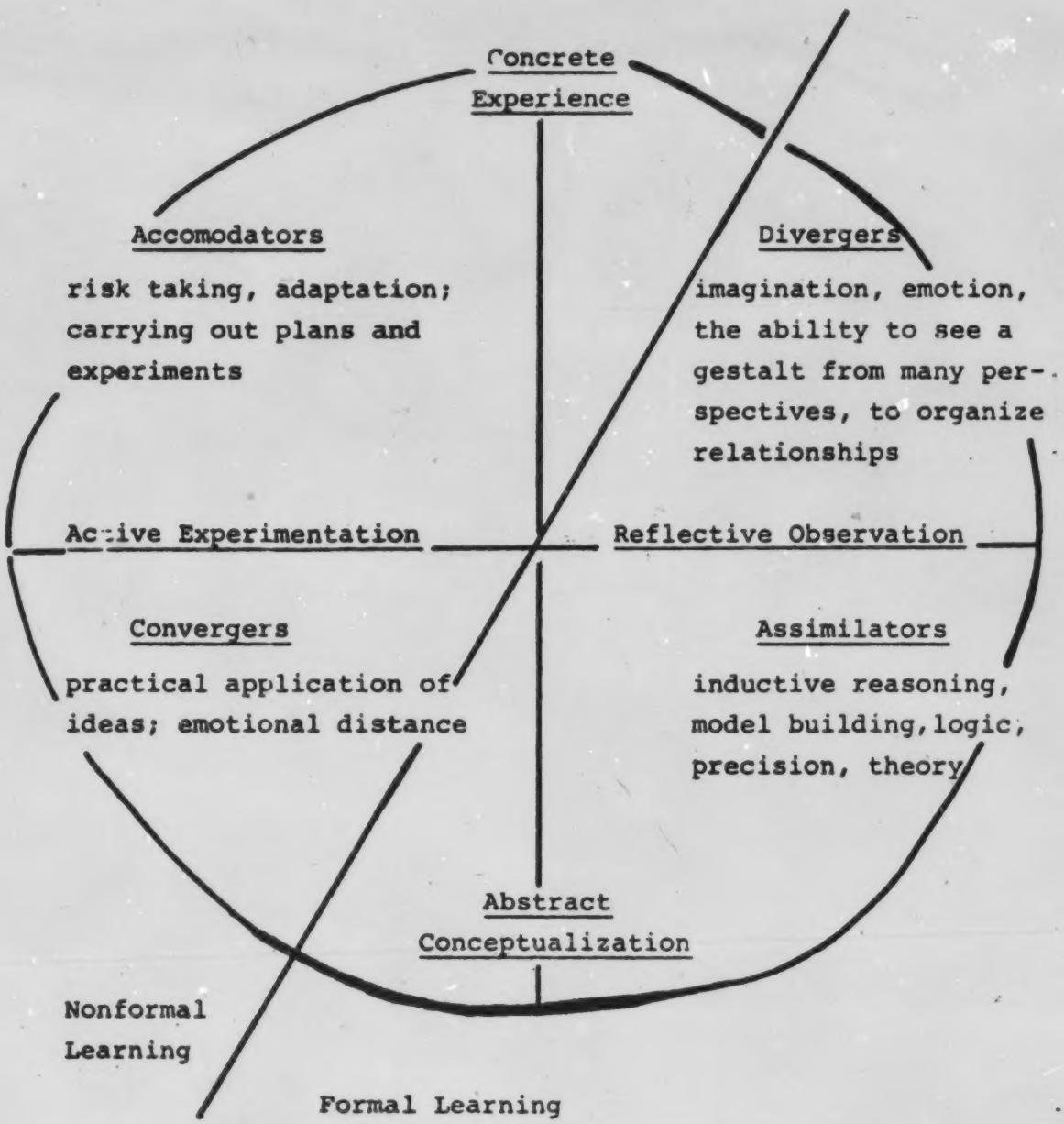
KOLB'S APPLIED THEORY OF EXPERIENTIAL LEARNING

Kolb's concept of learning style is based on Lewin's four-stage cycle of experiential learning. In this cycle, (see Figure 16) there are four basic modes of learning:

through concrete experience, reflective observation, abstract conceptualization, and active experimentation. Immediate concrete experience stimulates reflection and observation. One's observations are then assimilated into "theories" or generalizations. These generalizations are then used as guides in acting to create new experience, and so on through the cycle. To be effective as a learner or problem-solver, a person needs all four abilities, yet they represent two sets of polar opposites, and require continual choices in determining which abilities to bring to bear in any one situation. One dimension poses a tension between abstractness and concreteness, between specific and wholehearted involvement in an immediate situation and analytic detachment. The other dimension posits a clash between reflection and action, each of which tends to inhibit the other as one goes back and forth between the roles of actor and observer (Kolb, 1974). As Kolb and his associates define it, a person's learning style involves a predominant emphasis on one or several of these four modes. Research with a self-report measure called the learning style inventory shows that many people's preferred ways of learning fall into one of four quadrants, giving rise to a learning style typology with four types of learners: accommodators, assimilators, divergers and convergers. Figure 16 describes the major characteristics of each pure type. Note that each type

FIGURE 16

Learning Styles Within the Experiential Learning Cycle



combines adjacent points on the cycle; divergers, for example, have high preferences for concrete experience and reflective observation.

Kolb has applied these concepts largely to the fields of occupational socialization, career development, and management education. He has found that people's undergraduate majors tend to correlate with their learning style scores on his measure and that people's happiness within an occupation or discipline can depend upon the match between their favored modes of learning and those required by their work (Kolb and Goldman, 1973). A study comparing the career plans and learning styles of undergraduates, for example, revealed that where there is a mismatch of an individual's learning style and the learning style required by the discipline, students tend to take more courses outside of their major area of concentration, to be less committed to continuing study within the discipline, and more likely to be considering careers in some other field. Persons who choose different career paths in the same field (e.g. academic medicine, private medicine, public health), apparently have different characteristic learning styles and also use different sources of influence and information in making their decisions (Plovnick, 1974). Divergers tend to identify with persons they know and like; assimilators tend to be persuaded by the academic content and nature of the work.

Learning style is important in organizational communication and problem solving. A study of the members of different functional units within a single corporation showed that each group tended to have a characteristic learning style, reflecting its organizational task: marketing managers tended to be accommodators; engineers tended to be convergers; personnel managers tended to be divergers; and researchers tended to be assimilators. Communication across organizational units was more effective when unit managers had some mastery of the others' learning styles.

How are learning styles acquired or developed? Kolb and Fry (1974) hypothesize that in adolescence and early adulthood people's career choices (e.g. the choice of college versus trade apprenticeship, or the choice of academic specialties) accentuate an existing specialization of preferred modes of learning. In adulthood there tends to be a closer and closer match between an individual's characteristic learning style and environmental demands; this is true because of self-selection, and also because working environments tend to socialize people to fit them. In building a career, people tend to accentuate more and more their specializations; for some, changing careers or reorientation at mid-life or during other life phase transitions provides an opportunity to re-assert nondominant modes of learning and acquire a more highly integrated and effective style of learning. Lasker's hypo-

thesis (1975) is that a stage change may also result in a shift, or greater integration, in learning style.

One immediate application of this concept is in instructional design and evaluation. Kolb and Fry have found that students with different learning styles respond differentially to various methods of instruction (e.g. lectures, required readings, exams, peer discussion, self-diagnosis, role plays) and also to the amount of structure, or lack of structure, provided by instructors and emphasis on task versus process orientation. For example, reproduced below are the results of a survey of over one hundred students who had completed the same introductory course on human factors in management:

> Accomodators found the classroom sessions most helpful (contributed most to their learning from the course) because of its lack of structure, high amount of peer-interaction, and lack of any authority figure; Assimilators least preferred the course in general because of the classroom emphasis but did find those activities requiring some conformity to directions or rules helpful as well as assigned readings and theory inputs; Divergers reported the open-ended, unstructured homework papers and self-diagnostic activities to be helpful and least preferred peer interactions in class and course requirements (e.g. number of required papers, deadlines); Convergers found instructor/expert inputs and reading linking classroom activities to the 'real world' helpful and least preferred open-ended peer discussions and group autonomy. Although far from conclusive or generalizable about person-environment interactions, these data point to the need for a more specific, micro-level analysis of environmental factors. It would not have sufficed in this case to have asked students to evaluate the 'seminar format' or the 'experiential mode' of teaching. At this level of environmental analysis, most everyone liked it, but for different reasons. Divergers like the opportunity to watch and learn from it. Convergers liked the discussions relating it to the business world; Accomodators preferred the interactive, autonomous nature of the sessions; and Assimilators liked

> the role plays. Similarly in other surveys, we have found that although both Divergers and Assimilators prefer lectures, it is probably for different reasons. Both are comfortable in more passive, reflective situations but Divergers seem to be reacting most to the lecturer as a person (they also prefer faculty conferences, talks by experts and faculty feedback on papers) while the Assimilators seem to be reacting to the presence of an authority figure per se (they also prefer assigned readings, exams, and being given a task). The fact that such data is highly interpretive only convinces us that superficial definition of environmental factors is meaningless. There needs to be a systematic exploration of how learners see situations. It is not enough to know that a lecture or lecturer was helpful or not. We need to know why. Only then can we begin to understand the person-environment interface.
>
> (Kolb and Fry, 1974, pp. 33-34).

My own experience using Kolb's Learning Style Inventory supports the conclusion that students respond to various aspects of the same course differentially on the basis of learning style. They also tend to choose courses in which the instructor's style matches theirs. Whether an instructor tries to choose methods congruent with students' characteristic learning styles or expose them to new modes required by a task or discipline depends ideally on the students' goals and the instructor's conceptualization of what will ultimately be more helpful. The diversity of learning styles in any one group of adults dispels the notion that one method should "do the trick" for everybody. Given a diverse group, a reasonable approach would be to employ multiple instructional methods and provide some comfort and challenge for each type of learner.

On the level of program design, Kolb's typology can be used to identify the kinds of learning skills needed for success in a task or occupation. Kolb reports that the ability to design as it is seen by faculty at graduate schools of

architecture apparently involves both convergent skills (e.g. deductive problem solving within constraints, solutions expressed in practical terms) and divergent skills (e.g. creative or inductive thinking, ability to envision larger entities or a total "gestalt" from a subpart). A training program for architecture students would do well to take this into account, helping students who have convergent styles acquire the opposite skills of divergers, and vice versa.

In this analysis, it becomes important to distinguish between what a learner likes or prefers and what he or she needs, for either professional or personal development. Adults tend to be more comfortable in learning environments that reflect their established styles; they often need experiences that help them integrate the strengths of less preferred or least dominant learning styles. Thus, to foster development in someone's learning style, instructional methods might be chosen to either match, or to supportively mismatch, individual predilections.

Formal education, particularly higher education, usually operates only in the bottom diagonal of Kolb's experiential learning cycle (see Figure 16). Informal learning, avocational learning, and on-the-job training or "education in the school of hard knocks" tends to operate in the top diagonal. The mechanisms of nontraditional education--work/study, part-time study, external degrees, credit for life experiences, indi-

vidual learning contracts--move toward including all points on the learning cycle, as does professional education in areas of application like teaching and social work where academic learning is coupled with supervised clinical or practicum experiences. The movement toward competency-based education addresses itself to a perceived mismatch between formal requirements for certification and actual experiences that contribute to competence. In planning education on both the macro (national) level and micro levels (program or class) we might do well to take the entire learning cycle into account.

PROBLEM SOLVING AND JUNG'S PERSONALITY TYPES

Like Lewin in his cycle of experiential learning, Jung (Fordham, 1956) believes that we use four basic functions to orient ourselves to the world (and also to our inner world). These are thinking, by which we give meaning and understanding, make decisions and come to conclusions; feeling, which involves valuing, weighing and discriminating; sensation, which is sense perception; and intuition, which includes a perception of realities not known to consciousness, an openness to possibilities and to the workings of the unconscious. The functions of thinking and feeling are rational; the functions of sensation and intuition, irrational. People tend to

emphasize one of these functions, and they do this differentially, depending on whether they are basically introverted or extroverted, another of Jung's distinctions.

A person's habitual reaction constitutes a personality type. Jung believes that there are no pure types, given the irreducibility of human nature to simple classification. However, the concept of types has great value as an aid to understanding personal relations and education. That is, people just 'work' differently; if they react differently to situations, it is not necessarily because they are stubborn, or unhappy or obtuse. They may merely have different functional modes of operating. This seems basic and quite useful for teachers of adults.

Jung sees mental health as dependent on the neglected functions. Most people use one function; more complicated people use two, highly differentiated personalities use three; and including the fourth belongs to what he calls the individuation process, the reconciliation of the opposing trends of one's nature. This dialectical notion parallels observations of the growth process made by phase and stage theorists. For example, at the mid-life transition Levinson's work shows that many men begin exploring areas of self previously given no place in their life structure; acknowledging and exploring inner conflict and attempting to reconcile opposing inner tendencies is characteristic of autonomous and integrated

stages in Loevinger's scheme of ego development.

Ian Mitroff (1976) has adopted Jung's framework as a basis for advocating a dialectical approach to management training and organizational problem solving. The parallels between his work and Kolb's are striking in this regard. He speculates that there are four types of organizational problem solvers, each combining adjacent functions on Jung's cycles: NT (intuition/thinking), NF (intuition/feeling), SF (sensation/feeling) and ST (sensation/thinking). Figure 17 illustrates this conceptualization.

Mitroff's four types of organizational problem solvers differ from Kolb's four styles of experiential learners in that the four dimensions have different roots. Kolb's typology stays in the behavioral domain, reflecting its origins in Lewin, while Mitroff's formulation has an internal, psychoanalytic emphasis, reflecting Jung.

The problem for organizational effectiveness arises because, according to Jung, people can do well on one end of each of the two dimensions in Figure 17 but not on the other end and not on both ends simultaneously. In other words, people tend to develop a strong preference for one function and as a result tend to have well developed skills and abilities on only one end of each dimension. The implementation of ideas and policies looks different depending on one's personality type: scientists tend to have a perspective that

FIGURE 17

Jungian Dimensions of Mental Functioning as Problem Solving Types

THINKING (T)

(1) logical (2) analytical
(3) scientific (4) dispassionate
(5) cold (6) impersonal
ST (7) concerned with matters of truth (true/false) NT
(8) unconcerned with people's feelings
(9) theoretical
(10) concerned with rationality
(11) concerned with all encompassing scientific theories

SENSATION (S)

) careful (risk avoider)
) concerned with parts & details
) lives in present
) specialist (5) factual
) precise (7) concrete
) realist
) likes to develop a single idea in depth
) likes specificity and authority
) practical (12) conventional
) restrained (14) placid, controlled

INTUITION (N)

(1) risk-taker (2) generalist
(3) concerned with whole picture
(4) lives in future
(5) hypothetical (6) global
(7) speculative (8) idealist
(9) inventive (10) likes to produce many alternative ideas
(11) unconventional
(12) restrained
(13) bold, daring (14) likes generality and freedom

FEELING (F)

(1) alogical (i.e., neither logical nor illogical)
(2) poetic (3) artistic
(4) passionate (5) warm
SF (6) personal (7) atheoretical NF
(8) concerned with matters of ethics (good/bad)
(9) concerned with people's feelings
(10) concerned with justice
(11) concerned with uniqueness and individuality of all things

Source: Mitroff, 1976.

124.

combines sensation with thinking (ST), while managers' perspectives usually fall in the opposite quadrant combining intuition with feeling (NT). Mitroff uses this idea to explain why management scientists tend to have very different ideas about organizational problem solving than their top management clients. This is especially so because he sees policy implementation as a process in which one mind attempts to influence another to adopt its model of reality. Mitroff maintains that problem solving is most effective when all four functional modes are employed in dialectical fashion. He advocates a kind of management training that facilitates the emergence of all four orientations, and gives managers practical skills in each mode. He has developed successful training programs for managers based on these assumptions.

IMPLICATIONS OF LEARNING STYLE FOR EDUCATION

Of the three domains, learning style theories have the most direct application to the design of instruction and the least relevance to larger life issues. The uses already made of Kolb's and Hill's work are illustrative in this regard, whether the goal is prescribing differential paths to mastery learning for young adults who might otherwise not succeed in college courses, or the construction of learning environments that are deliberately rich along the four dimensions of the

the experiential learning cycle: cognitively, behaviorally, perceptually, and affectively. Learning style theories give specificity to the concept of learning as an interactive process between an adult and an instructional, or experiential, environment. Knowledge of the learning style biases of students, faculty, and subject matter facilitates careful attention to the components of course design and evaluation. Instructors can be more effective if they are aware of the learning style biases embedded in their teaching methods as well as their disciplines, and of students' differential reactions by learning or cognitive style. This holds for folk dance and auto mechanics as well as management development.

The preceding paragraph is not meant to imply that learning style is unrelated to personal development. Kolb and Fry (1974) describe the acquisition, specialization and integration of learning styles in Piagetian language as adaptive processes of increasing complexity and relativism. Thus, there are important processes of personal growth associated with the four modes of experiential learning. These processes have parallels in developmental stage sequences and clear relevance to life phase transitions. Jung's contention that more complex personalities successfully employ two, three or four mental functions rather than only one also has relevance for personal development. The hypothesis of

developmental stage theorists that cognitive development a necessary although not sufficient condition for growth in other areas argues the relevance for personal development of even trait-oriented formulations of cognitive style. Because social concensus places the development of abilities to learn squarely within the province of education, this aspect of personal development is legitimately an educator's business.

Although learning style is the least problematic of the three domains, a change in one's learning style is not a trivial occurrence. For example, Carolyn Kegan who teaches a "learning to learn" seminar for adult students at Clark University describes the process in these terms:

> . . . if I really want to attempt some dialectical resolution of my learning style, diverger to converger, then I am going to confront my opposite and if I am not just intellectualizing and labeling my experience then that initial experience of <u>other</u> usually scares or angers me. Mitroff's idea is interesting but the dialectical reconciliation of the interplay of opposites is a big project. First of all my learning style, diverger, intuitive thinking, is a quality about the way I incorporate <u>all</u> experience, learn, and it runs through everything. It is not a word, it is a rhythm of being and <u>in</u> the realm of experience that confronts SPIRIT. Now to change the fundamental quality of spirit, which is possible, is a ferocious war with one's habitual way of being.

Knowledge of learning style theories can be useful to adult students. Knowing one's strengths and the modes that one habitually neglects can make learning a more conscious activity. The theories can provide conceptual labels to

guide choices of courses or instructional methods and can be aids in understanding one's reaction to various approaches. With this added increment of self-knowledge, people then have the choice of emphasizing their strengths or trying to develop new skills and abilities. This is particularly important if the goal is self-directed learning, or the mode of instruction requires self-direction. Knowledge of learning styles can legitimize nonformal learning, and can help people become comfortable with their own characteristics as learners.

For example, administrators or governmental program officers returning to universities for mid-career master's degrees in public administration are predictably disoriented by the assimilative character of most programs in contrast to the accommodative mode (Kolb's terms) of learning in which they have become proficient through the execution of their daily responsibilities. They tend to expect themselves to be as competent in the unaccustomed academic style as they are on the job; it relieves anxiety if they see their disorientation as due, at least in part, to differences in learning style and not absolute competence. Knowledge of learning style can thus add specificity to learner-centered reform, a current catchword in higher education.

Knowledge of the learning style bias of various instructional methods, occupations, professions and disciplines could also lead students and faculty to more conscious

choices in areas such as admissions and program organization. For example, should academic departments admit only learners whose styles are congruent with that of their discipline? If so, according to Kolb and Mitroff, they lose the problem solving skills of the opposite polar perspective and in the long run may produce less creative scholars or professionals. An alternate stance is to admit mavericks and spend some time and energy helping them develop a learning style congruent with occupational or professional expectations. Universities might consider organizing their disciplinary structures by learning style, a more useful notion, perhaps, than inter-disciplinary studies. Specializations with similar learning styles could be identified across disciplines and career paths, and made public so that people could switch fields more easily. This could be useful for persons changing careers or using schooling as an aid in a life phase transition.

Predictably, the unresolved questions with respect to the application of learning style theories are centered in the how-to-do-it domain. Which theory would make the most useful contribution to instruction? How does one use the trait-oriented theories? What is the best way to make learning style information available to students, faculty and administrators? How much formalization of diagnosis and instruction in the basics of learning style is appropriate for a particular program or institution? Providing choices

and increasing understanding require time, trouble, work and energy. Will the rewards match the expenditures? These questions are resolvable on the basis of personal and institutional priorities.

Perhaps, in the long run, the most valuable use of the learning style construct is as an antidote and practical help in rectifying the overemphasis on cognitive abilities suited for traditional schooling and academic success. K. Patricia Cross, at the Association for Higher Education's 1974 national conference which considered the relevance of life-long learning for higher education, proposed a model of education patterned after the types of skills needed by various occupations. She defined work as requiring different functional skills depending on whether the emphasis is on work with data, work with people, or work with things. She suggests that we provide adults with opportunities to pursue excellence and be recognized for it, along one of these three dimensions, thus giving more people an opportunity to make real and valued contributions.

> Equal opportunity means more than the opportunity to develop mediocre competence in the area of someone else's strength. Equal opportunity means being provided with the tools to develop one's own talents to the point of excellence. Most people today speak of education for diversity as though it were education by diversity. We are willing to entertain the idea that people can learn the same things by different methods or in differeing amounts of time--although we are slow to implement even those obvious facts. When we do implement them, it is with the implicit understanding that some students will take to tra-

> ditional academic learning like a duck to water, while others will struggle to remain afloat. Never mind that our sinking duck can run like a gazelle or fly like a swallow. What we are not yet ready to concede is that running or flying is as good as swimming and that our world is better for the existence of all three abilities, appropriately used.
> (Cross, in Vermilye (ed.), 1974, p. 92)

This recognition of the value of varied learning styles is an appropriate ideal for an egalitarian society with meritocratic values.

CHAPTER V

APPLICATIONS OF THIS FRAMEWORK TO EDUCATIONAL PRACTICE

INDIVIDUAL, INSTITUTIONAL AND SOCIETAL LEVELS OF APPLICATION

In the preceding chapters I have synthesized research and theory relating adult development and adult learning. It is clear at this point that there are wide differences among theorists, across domains and within them. There is no superordinant theory of adult development that might inform educational practice. There are limits to our current knowledge and unresolved questions, many of them ethical in nature and profoundly complicated by the fact that as individuals and institutions we are in the midst of the developmental sequences we might seek to influence.

Throughout this paper I have indicated current applications of theories, suggested possibilities, and raised questions about other potential uses. The primary use of this famework is to serve as a cognitive map from which to reexamine and reconceptualize some dimensions of education for adults. The major contribution of the conceptual framework elaborated here is the demonstration that people's subjective experience as learners is widely divergent, but not randomly or whimsically. All three domains identify commonalities and individual differences which clarify "where a person is

at" developmentally and indicate directions of growth. This knowledge raises our consciousness of new categories in which we might make judgments about the purposes, methods, design and delivery of education for adults. Being conscious of the developmental aspects of education and the larger meanings of education in people's lives, we can then take more responsibility for our actions and their effects.

Teachers and program administrators can modulate their expectations and teaching style on the basis of this knowledge, and employers can make better intuitive assessments about essentials of motivation, satisfaction and potential matches between career development and personal growth. We all practice adult education in the sense of being intimately involved with our own growth and learning, and with that of others whom we know and work with. As educational practitioners we can use knowledge of the patterns of adult development to inform our judgment in shaping institutions and offering services to adults.

It is also possible that a developmental perspective can inform our judgment in fostering social and institutional change. This is a more problematic stance, partly because of the near impossibility of institutionalizing or bureaucratizing the creation of the interpersonal environments and conditions which support individuals' growth. Thus, it is important that our stance be one of letting theory inform

judgment rather than one of applying theory. Bill Perry, whose sequences of intellectual and ethical development are described in Chapter III, cautions eloquently against the dangers of allowing theory and conceptual labels to come between you and another person.

With this caution, I want to describe potential applications of the ideas in this conceptual framework at three levels: individually, institutionally, and as a society. Each level of application carries with it increasing complexities and dilemmas of collective action on a broader scale. Figure 18, which follows, summarizes my view of the contributions of the three domains in this framework at each level of application.

There are different focal concerns at each level of application. At the individual level, the use of research and theory is in understanding oneself and others, of raising one's consciousness of developmental patterns and allowing this awareness to inform one's judgments and actions on an ongoing, daily, largely interpersonal basis. This in my opinion is the primary area of application, the first concern of a practitioner, and the basis for all other applications. At the institutional level, knowledge of the dimensions of individual's development can inform program design and institutional strategy, institutional structure, organizational climate, ideas of staff and career development, and concepts

FIGURE 10

Applications of the Developmental Framework
at Individual, Institutional, and Societal Levels

	INDIVIDUAL	INSTITUTIONAL	SOCIETAL
9 8 A 8 8	Becoming aware of critical tasks and issues underlying our own and others' participation in education; awareness of the function of education in mediating life transitions. Becoming aware of the relationship of education and career development to life structure changes associated with neglected aspects of self. Responding to self and others with more understanding of larger life issues, and with tolerance and the expectation of stress and disequilibrium.	Reexamining socialization processes, both formal and informal, and the psychological contract institutionally negotiated with students to reflect life phase concerns and the differential function of education in life phase transitions. Reconceptualizing program design and institutional strategy to identify groups not served, and support groups at risk. Institutionalizing ways to help individuals deal with phases of adaptation to a program, and the stress of personal transition and changes in life structure often associated with education.	Creating social norms and expectations that adults grow, develop, and make life structure changes which cause periods of transition and disequilibrium; bestowing social permission for continued development. Broadening the notion of one-time schooling for children and young adults into the ideals of lifelong learning and recurrent education. Changing the lockstep organization of the current educational system to foster older adults' pursuit of degrees, mid-career training, educational alternatives from work, second chance education. Viewing continued and appropriate education as a social entitlement. Reexamining current educational and social services for new demand and incentives for expanding educational services.
8 7 A 6 5	Becoming aware of sequences of cognitive, emotional, interpersonal and ethical development, and their relationships to differences in motivation, cognitive style, conceptions of knowledge, locus of responsibility for learning, role relationships for teachers and students, coping styles. Understanding the stage-related nature of perception of social environments. Locating oneself and others within these patterns and thus becoming able to communicate and teach more effectively. Setting directions for one's own and others' growth and creating conditions for development.	Scrutinizing and clarifying the goals and effects of educational programs, being explicit about stage change and unintended consequences. Deciding whether to consciously mediate or promote movement along developmental sequences. Matching overall orientation of institutions, modes of teaching, role expectations, epistemological stance with students' stage of development. Redesigning programs to match and foster students' development. Diagnosing teaching difficulties; clarifying the interpersonal requirements for innovation. Analyzing relationships between institutional objectives, organizational structures, organizational climate, staff behavior and one's strategy for intervening to promote development.	Identifying the stage-related perspectives underlying conflicting statements of educational goals or differential interpretation and implementation of the same goal. Recognizing and rectifying conditions of economic inequality and social injustice that set ceilings on individual development. Understanding parallels between individual, institutional and societal stages of development; identify prerequisite orientations for social evolution.
8 7 7 L 8	Identifying one's own learning style, its strengths and limits; making choices of fields of study, methods of instruction, and tasks congruent of their learning style demands; choosing to develop opposite strengths or experiment with new styles. Understanding others' learning style differences, and differential responses to modes of instruction, amount of structure, and task vs process orientation in an instructional or problem solving setting.	Using knowledge of learning styles to inform admissions decisions and counseling procedures; and possible reorganization of disciplines and programs of specialization. Organizing curriculum design and evaluation to ensure an effective mix of instructional modes, take differential demands of disciplines or tasks into account, developing ways to individualize instruction and foster success; match or stretch individual's styles Employing the perspectives of those with different learning styles contributing to effective problem solving.	Creating societal norms and attitudes that recognize excellence in all learning orientations, not only the traditionally academic; recognizing the value and limits of each approach to learning and problem solving. Scrutinizing the formal and informal educational system for learning style biases and lacks. Making public knowledge the learning style demands of various disciplines and occupations; using it in manpower planning and the design of training on a broad scale.

of innovation and planned change. At the societal level fall the broader concerns of policy making in a loosely-organized educational and social service system and of influencing societal norms, values, attitudes and expectations. At each level the crucial question is how do constructs, cognitive labels which are connected to emotionally valued ideals, inform action? How does an individual, an institution, or a society use knowledge of developmental patterns to self-consciously foster the potential for greater learning and enhanced quality of life?

With life phase, the focal concerns of application at the individual level are awareness of the function of education in mediating life phase transitions, in understanding one's own critical tasks and disequilibrium in transition periods and accommodating to that in others, and in recognizing the centrality of life structure and identity as education relates to both career and personal development. At the institutional level knowledge of life phase calls for a careful examination of the socialization processes of an institution, and reconceptualization of program design and institutional strategy for identifying and serving adult clients. At the societal level the need is to create expectancies that adults will change and develop and to create more opportunities for adults to use education in that process. This calls for replacing the lockstep of a one

chance educational system with one that has multiple entry points and methodologies, and views educational opportunity for adults as a social entitlement.

The construct of learning style contributes most to effective instruction. At the individual level of application, knowledge of one's own learning style enables one to be aware of its strengths and limitations, to understand and appreciate others' differential styles of learning, and to make conscious choices of fit or stretch between occupations, disciplines, and modes of learning. At the institutional level, (and the level of individual practitioners), knowledge of learning style is useful in the design and evaluation of instruction and in counseling at the system, program and classroom levels. Societally, recognition of differences in learning style might legitimate recognition of excellence in broader dimensions of human capabilities and might have practical uses in the design of manpower training and career development.

The construct of developmental stage fosters understanding of the stage related subjectivity of people's responses to education and other social environments. On the individual level, awareness of developmental sequences in cognition, emotion, interpersonal relations and character formation makes it possible to locate onself and others within those sequences, to diagnose difficulties in communication, and to

set directions and create conditions for further development. Institutionally, an understanding of stage progressions calls for a close scrutiny of educational objectives and outcomes. It offers guidelines for individualizing instruction and for matching the overall orientation of an institution with students' orientations in the areas of motivation, role expectations and epistemological stance. Moreover, viewing education as a "developmental intervention" calls for a careful examination of the degree of congruency between an institution's aims, its organizational structure and climate, its conception of what an educator does to promote development, and the effects of those actions. On a societal level, an understanding of the thought structure and personality orientations connected with developmental stages can clarify the personality dynamics behind conflicting policy objectives as well as difficulties in implementation. Understanding parallels between individual, institutional and societal stages of development creates a sobering matrix for viewing the relationships among individual, institutional and social changes. This matrix identifies prerequisite orientations for social evolution and identifies constraints on individual development set by social conditions.

SPECULATIONS ABOUT THE INTERSECTION OF INDIVIDUAL DEVELOPMENT AND INSTITUTIONAL AND SOCIAL EVOLUTION

The terms stage, phase and style can refer to dimensions of variation among organizations or institutions, indeed any larger social system, as well as to developmental variations among individuals. This is one starting point for exploring institutional and societal applications. Within this framework, the term phase indicates an organization's evolutionary history over time (young, old, size, complexity of affiliations and networks); stage, the internal logic of its structure and activities, its "character" and basic worldview; and style, its functional modes of doing business and adapting to the environment. This characterization of organizations means that we can locate both individuals and institutions within relevant developmental sequences, and attempt to describe their interaction.

There is a small but growing body of organization theory relating to these dimensions. Larry Greiner (1972) has constructed a phase theory describing organizational evolution over time. Wilham Torbert (1974) has developed a theory of pre- and post-bureaucratic stages of organization development in which each stage describes qualitatively different frames of reference for activity. In my framework, this is a cross between a stage and phase theory, parallelling Erikson's

stages of psychosocial development. As mentioned in Chapter III, Kohlberg and his associates have classified the moral atmosphere or justice structure of prisons as analogous to stages of moral judgment. Similarly, Harry Lasker and I (1975) have speculated about the characteristics of organizational analogs to Loevinger's ego stages. George Weathersby (1974) has hypothesized relationships between phases of organizational evolution, the developmental stages of higher education administrators, and internal systems for decision making and information utilization. Examining where we are as individuals and as organizations on these dimensions can be provocative. For example, Weathersby concludes that the most appropriate managerial mentality may be different for each organizational phase; and that the different world views associated with an organization's and an administrator's developmental stage require differentiated systems for decision making and management information systems. Arthur Chickering, Vice President for Policy Analysis and Evaluation at Empire State College, has employed a conceptual framework similar to the one I have elaborated to propose directions for program development and the professional development of the college's faculty and administrators (1975).

Within this larger map we can locate ourselves as individuals and as institutions. The first and most important use of this knowledge is an increased awareness of sources

of tension and possible directions for change. For example, we can be reasonably sure that an educational system cannot operate at a higher stage mentality than that of its administrators or instructors. Students will respond to educational environments differentially, depending in part upon their own life phase, developmental stage and learning style. Significant problems can be expected when student characteristics are significantly mismatched with those of individual faculty and administration, or the orientation of the institution as a whole. A good developmental match might be hypothesized as an institutional mentality slightly ahead of students' own worldview, or a higher stage mentality that can be mediated for persons of varying orientations.

Argyris and Schon's (1974) distinction between an espoused theory and a theory-in-use is relevant here. A faculty member or instructor can create a learning sytem only out of the epistemological orientation of his or her own developmental stage, and no higher. A conformist teacher can espouse an autonomously-oriented educational philosophy if that is the kind of system that is officially sanctioned; however, his theory-in-use will remain conformist. Hence the fate of many curriculum reforms and "nontraditional alternatives" that turn out to be traditional, after all, in the crucial areas of authority, expectations, epistemology and interpersonal relationships. Torbert, (1974) makes the

point that it is impossible to institutionalize a stage change within an organization apart from transforming the people within it. Thus, the first and most important use of knowledge of the dimensions of individual and organizational development is to apply it to transforming ourselves in ways congruent with our ideals.

A second approach to application lies in the problematic but useful concept of matching individual needs and mentalities with institutional characteristics. One problem on an institutional level comes with determining what should be matched, with minimizing unnecessary costs in bureacratization, and with the ambiguity of the underlying theory which also supports mismatches as elements of producing growth. One might match program characteristics and forms of instruction with student characteristics, and also match characteristics of faculty and administration with characteristics of the institution itself with the purposes of instruction, type of program offered, and desired student clientele.

An institution can choose to serve a diverse clientele with a variety of instructional options, providing "something for everyone," or choose to provide a single kind of instruction for a more or less homogeneous group of students, choosing one thing and doing it well. This choice is a matter of policy and of tradition, of funding and of opportunity.

The British Open University, for example, offers adults

a standardized but nontraditional route to a bachelor's degree; televised lectures, packages of carefully prepared instructional materials, and local centers for tutoring and individual help are the key features of the instructional program. In contrast, Empire State College, a nontraditional alternative college of the State University of New York, offers an individualized form of instruction based entirely on learning contracts between mentors and students. A student's individual purposes and present goals determine the parameters of the degree program; past experiences can be included under procedures for assessing credit for prior learning; and individualized field projects, work experiences and travel can be written into one's learning contracts.

It is probably irrelevant to debate the differential effectiveness or appropriateness of these two models; both are extraordinarily effective with respect to the social purpose of allowing adults a flexible second chance at a college education. However, I believe that the Empire State model has greater potential for facilitating developmental change in its students. Its procedures require a student to set objectives, choose among alternative learning strategies, specify criteria for evaluation and assess results in a collaborative relationship with a faculty mentor. They institutionalize a process of assessing past experience, setting current goals, and relating academic learning to

work, travel and community involvement that would seem particularly integrative for adults in a life phase transition, in which one is renegotiating internally and externally the ways one is plugged into society. There is informal evidence of movement along developmental stage sequences in case studies of learning contracts compiled by a faculty task force exploring the effects of the contract mode of learning on the development of interpersonal competency (this is a project of CAEL, the Congress for the Assessment of Experiential Learning). Finally, the individualized mode at Empire State allows greater variety of learning styles, (students for example, can contract to take traditional courses elsewhere), while it simultaneously requires prerequisite skills in setting one's own objectives and negotiating institutionally viable ways to meet them.

Both instructional models offer alternative routes to a bachelor's degree which "match" some students' needs more closely than others. Lasker speculates that particular instructional methodologies set ceiling on their potential for fostering developmental change. Classified according to overall orientation using his stage-related view of adult education (see Figure 12), the British Open University has a conformist approach to imparting knowledge; its standardized mode of instruction precludes taking people "where they are" individually and helping them develop learning skills for

negotiating the next step. However, this mode is probably particularly appropriate for large numbers of adults who, in fact have conformist views of education. The problem with this match lies in the (theoretical) absence of disequilibrium. In contrast, Empire State College's mode of instruction is basically oriented to an autonomous perspective; it can be used by conformist or conscientious students, (the large majority of the college's students) but its instructional procedures foster the self direction and skills of higher stage perspectives. We do not know enough about prerequisites for institutional matches to do anything more than speculate about their potential effect on individuals' development.

A second example of the differences in an institution's stance toward instruction can be found by comparing two professional schools at Harvard University. The Harvard Business School uses only the case method of instruction, and insists that M.B.A. candidates complete a required sequence of courses. In contrast, the School of Education operates on a "plaza" or "supermarket" mode of instruction; it admits a deliberately diverse student body, offers instructional alternatives in various modes and styles, refuses to identify or define what master's and, in most cases, doctoral students should learn, imposes few requirements, and offers a maximum and personally disequilibrating degree of individual choice. Students at the two schools

speak of predictably different tensions. Business students speak of the stress of impossible work loads and heightened competition, reflecting what is believed to be the "real world" environment of business. Education students complain of the strains of choosing courses, setting directions, evaluating accomplishments, and managing the ambiguity and multidimensionality of self-defined learning situations; this reflects a profession with a person-oriented ideology, which is characterized by a conflict between conservatism and change in which many of the most interesting roles are synthetic and self-defined. We lack hard data about the effectiveness of both schools in preparing competent professionals, yet it is reasonable to conclude that both models are viable. Viewed from the perspective of instructional matches which might foster development, the School of Education's instructional model probably serves a wider variety of students and sets fewer ceilings on opportunities for personal growth.

From society's perspective, whether an educational institution accommodates adult diversity with a variety of instructional orientations or serves a selected clientele with a single instructional mode is not as important as the nationwide availability of a system of postsecondary education that can accommodate people's various needs and purposes with services of substance and integrity. Additionally, any

homogeneous group is incredibly heterogeneous along our three dimensions of analysis; some teaching methods and program designs take these differences more into account than others. Understanding these dimensions is especially useful for non-traditional programs or approaches where the aim is to individualize either the process (make the schedule and procedures fit needs of working adults or the elderly, for example) or the content of instruction (facilitate individualization of goals and methods of achieving them: what is learned, why and how). If we are to have a system of lifelong learning, there is a great need to relate institutional organization and procedures to educational goals.

For example, the report of Michigan State University's Task Force on Lifelong Education, (Hesburgh, Miller and Wharton, 1973), contains sixty-seven recommendations deemed necessary to expand the University's role in providing opportunities for lifelong learning for Michigan's citizens. These include modifications of existing procedures in admission, registration, orientation, transfer of credits, scheduling, time limitations for degrees, enrollment options, support services, credit for past experiences, and certification; there are also recommendations for greater utilization of educational technology; modifications of residence and credit regulations for degree and nondegree programs; administrative reorganization; changes in academic and financial

policies; establishment of a Community Lifelong Education Project to explore ways to provide meaningful community services; and additional efforts in interinstitutional co-operation. The extensive nature of these recommendations reaffirms the system's nature of institutional orientations and indicates the magnitude of the necessary changes if we are to move from an "institution-centered" (conscientious) to a "person-centered" (autonomous) system of higher education.

However, we do not change the orientation of our educational institutions without both creating and following changes in the larger society. Hesburgh, Miller and Wharton, the authors of Patterns for Lifelong Learning, all three presidents of major universities, state in their preface that their aim is to advocate basic changes in attitudes toward learning and to build new learning systems in tune with contemporary society. Miller, in the second essay of the book, writes:

> The new concept of education did not come about through the initiative of educators alone. Instead, it reflects some new realities and is a response to the turbulence in society--the shift from rural to urban patterns of living; the imbalance between social and technological invention, the growth of new knowledge and the obsolescence of old, and the mobility of the student. Technological change is so devastating to human competence that the monopolization of education by the young is insular, making continuous lifelong learning imperative. The disparity between the promise and the efficacy of education is so great that the enclosure of education within schools and colleges is ineffective, making

> community-wide educational activity essential. The expansion of the idea of education into a concept of lifelong human development is so pervasive that reliance on traditional methods is inefficient, making crucial a new mix of approaches to family, school, corporation and community.
> (Hesburgh, Miller and Wharton, 1973, p. 52, emphasis mine.)

Another way to state this same concept is to say that implementing a concept of education that promotes individual human development will require an institutional reorientation, or stage change, of considerable magnitude.

We have some visionary glimpses of methodology. Carl Rogers describes student-centered modes of teaching in Freedom to Learn (1969). William Torbert, in Organizing the Unknown: A Politics of Higher Education (1975), writes about the difficulty and challenge of teaching a required course in action learning for four hundred persons at the Southern Methodist University School of Business. He develops a theory of "liberating structures," structures that can help students 'change stage' in conceptions of learning. Chris Argyris and Donald Schön (1975) write of ways to promote "double loop" learning in which one questions the previous structuring of reality and revises action strategies as the result of new information received in a qualitatively different framework. Harry Lasker, Julie Donnelly and I (1975), describe an experiential mode of teaching that is responsive to adults' developmental stages and varied learning styles;

it heightens the integration of personal insights and promotes skills of application. These are small scale or classroom systems; to apply these dynamics on an institutional scale within a national system of postsecondary education that is responsive to all the educational orientations of the population is a gigantic task. Ivan Illich, in Deschooling Society, and Paulo Friere, in Pedagogy of the Oppressed (1968), describe person-centered learning systems on a society-wide basis; although the language is different, these are the themes of the Carnegie Commission on Higher Education's proposals in Toward a Learning Society, Alternative Channels to Life, Work and Service (1973). The challenge of promoting lifelong learning which fosters adults' development is one of creating an orientation and methodology which allows people of different developmental stages and with diverse learning styles at different life phases to pursue their educational objectives with as few constraints and as much support as we can institutionalize.

It is a cliche to say that, with the rapid expansion of knowledge and the rate of change described in Tofler's Future Shock (1970) we need a society of people who have "learned how to learn." Yet this statement takes on added meaning in a context in which learning itself has differentiated meanings along a developmental sequence with three broad dimensions. Clare Graves, a pscyhologist studying human values, suggests

in The Futurist (1974) that we are on the verge of a cataclysmic social transformation in which our culture will move from a base in deficiency values to one in "being" values. If we take seriously the perspective that development should be the aim of adult education, we are talking about eventual, widespread and continuous change in individuals, institutions, and in society. Although educational institutions are functionally conservative as organizations, they, too, will help to create this transformation.

TOWARD A THEORY OF PRACTICE

It is at this point that the ideas in the conceptual framework connect with social ideals and bring us up short in terms of our ability to actualize them. Research and theory explicating dimensions of adult development are linked with ideal visions of education and society, and with the ideology underlying professional practice. In the end what powers an educational system is its underlying vision. Cognitive maps and conceptual labels are connected to broader visions and dreams. With the dream of lifelong learning we are talking about the function of education in improving the quality of life for every American adult, and the vision of America as a land with unlimited opportunity for the fulfillment of individual potential. These are worthwhile dreams;

they involve self-esteem, enjoyment, understanding of oneself and one's world, skills with which to accomplish worthwhile work, and the ability to keep promises to oneself that have integrity and meaning. These dreams are not easily realized. Social and economic inequalities set ceilings on the quality of life and potential for individual fulfillment of far too large a segment of our population. We do not really know how to use our socializing institutions and diffuse educational system to operationalize our ideals. If there is to be life-long learning, if education is to contribute more than it does now to the quality of life, then we must incorporate these ideals into social norms, institutional procedures and inter-personal interactions on a large scale; otherwise, they will remain hollow cultural myths.

Thus, this framework is three-dimensional in its classification of the domains of individual development, but one-dimensional in its approach to educational practice. What is missing is a clear understanding of how individuals, institutions and societies use labels and constructs such as the ones in this framework to promote their own growth, enhance their visions, and self-consciously guide their own evolution.

For example, there are ways in which we can foster individuals' knowledge of themselves along relevant dimensions of stage, phase, and style. Once individuals have a knowledge

of themselves along these dimensions how do they use it? Is the map too complex? What are the tensions that accompany such insight, or feelings of responsibility to explore a larger set of factors than people normally do when making choices or encountering others? We have few answers to these questions, and they are germane to applications at the institutional and societal levels as well. What would be the resulting bureaucratization if an institution promoted self-knowledge along these three dimensions and then tried to organize relevant responses? The result might be so complex that a vast bureaucracy might be needed to manage it, eliminating the individual initiative and personal responsibility which is the basis of personal growth. Measurement is also a key problem for implementation. How could we develop and use measures for these dimensions? In a test conscious and achievement-oriented society, we do not need a PSAT, SAT or GRE series for personal development.

There are numerous unknowns. Developmental theories introduce conceptual labels for clasifying new phenomena; the mere existence of new labels within a coherent conceptual structure can legitimize reexamination of assumptions concerning adults as clients, their needs, and appropriate responses in interpersonal, instructional and institutional terms. The provision of a new cognitive structure for re-

interpreting old practices and assumptions is one of the first requirements for a successful attempt to induce changes within organizations. The constructs in this conceptual framework might provide the stimulus for that first step. But there is a difference between reacting to a stimulus and actualizing a dream.

In Theory in Practice (1975), Argyris and Schön point out that to actualize dreams of human potential we need theories of professional practice with a behavioral rigor that matches the complexity of our ideal visions. This requires an epistemological stance based on inquiry and awareness, and an openness to conflicting perspectives and investigating the interpersonal effects of one's actions which is rare among people and within organizations. The concepts in this conceptual framework, including the basic idea that adults develop in predictable ways, are releasing and powerful. They contribute to shared social purposes and visions of what is possible, thus setting goals and upper boundaries for public policy and private action. A crucial lack from the practitioner's standpoint is knowledge of the process of using concepts of development to inform individual and institutional learning.

Lacking this disciplined approach to action, there are clear dangers associated with the affirmative power of visions and dreams. It is well to heed the warnings of those who

have created the theories. Bill Perry, for example, warns those who want to apply his epistemological sequence, or other developmental theories, not to allow their good intentions to preclude careful scrutiny of their actions. He sees the crucial question for educational practitioners as determining how to implement their good intentions, and warns us to beware of "doing good because doing good can be an excuse not to question what you are doing."

James Fowler, a theologian and creator of stages of faith development which parallel Kohlberg's stages of moral judgment, sees educators' interest in developmental theory as ensuing from its function in providing a new theology for education. A theology is a perspective based on faith, the effort of a community to explicate its practice. The danger for education in adopting a developmental framework to guide its purposes and practice lies in the human tendency to buy into a charismatic vision without inquiring into its unanticipated or unintended consequences, and to create promises and expectations that go unfulfilled. Similarly, Chris Argyris responded to an earlier draft of this paper by pleading for caution on my part, on his, and on others' parts not to translate our "emotionally based intellectually articulated dreams" too easily into dreams of policy. He went on to explain that this over-promising may be one of the reasons for disillusionment with education, the late

sixties being full of opportunities to realize such dreams and few having worked. These warnings are well founded. They create dilemmas for practitioners who cannot be bystanders but must soberly balance the human costs and benefits of actions based on dreams.

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